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BULLETIN

OF

THE PROCEEDINGS

OF THE

Academies, &c. - Washington

NATIONAL INSTITUTION

FOR

THE PROMOTION OF SCIENCE.

ESTABLISHED AT WASHINGTON IN 1840.

BRIT. MUSEUM NATURAL HISTORY

WASHINGTON:

PRINTED BY GALES AND SEATON.

1841.

NATIONAL INSTITUTION

FOR

THE PROMOTION OF SCIENCE,

WASHINGTON.

The National Institution was organised at the seat of Government on the 15th May, 1840, by the adoption of a Constitution, and a declaration of the objects of the Institution : which are to promote Science and the Useful Arts, and to establish a National Museum of Natural History, &c. &c. The following Officers were appointed, to continue until the annual meeting in January, 1841 :

DIRECTORS.

Hon. JOEL R. POINSETT, Secretary of War.
Hon. JAMES K. PAULDING, Secretary of the Navy.

COUNCILLORS.

Hon. JOHN Q. ADAMS, House of Representatives.
Col. J. J. ABERT, Chief Topographical Engineers.
Col. JOSEPH G. TOTTEN, Chief Engineer.
Dr. ALEXANDER McWILLIAMS.
A. O. DAYTON, Fourth Auditor.

TREASURER.

WILLIAM I. STONE

SECRETARIES.

FRANCIS MARKOE, JR., Corresponding Secretary.
PISHEY THOMPSON, Recording Secretary.

The first stated meeting of the Institution was held at the rooms of the Institution on the second Monday in June.

PROCEEDINGS

OF THE

NATIONAL INSTITUTION

FOR

THE PROMOTION OF SCIENCE.

Vol. I. JUNE TO DECEMBER, 1840. No. 1.

Stated Meeting, June 8, 1840.

Present, twenty-six members.

Hon. Joel R. Poinsett, First Director, in the Chair.

By-Laws were presented by the committee appointed to prepare them, and approved by the meeting.

The members formed themselves in classes under the Departments specified in the By-Laws, and the Departments were directed to organize, and report at the next meeting.

The following donation was received:

Fossil vegetable remains, from the deep cut of the Chesapeake and Ohio Canal, near Harper's Ferry.—*From M. Krebbs.*

Special Meeting, June 26, 1840.

Hon. Joel R. Poinsett in the Chair.

Present, fifteen members.

A committee of three members, consisting of the Hon. W. Cranch, Judge of the Circuit Court, Hon. H. D. Gilpin, Attorney General of the United States, and T. H. Crawford, Esq., Superintendent of Indian Affairs, was appointed to inquire into the expediency of petitioning Congress for an act of incorporation.

The Constitution was directed to be engrossed, for the signatures of the members at the stated meeting in July, and ordered to be printed with the By-Laws, for distribution.

Stated Meeting, July 13, 1840.

Present twenty members.

Hon. JOEL R. POINSETT in the Chair.

The committee appointed on the 26th ultimo, reported that it was not expedient to apply to Congress at the present session for a Charter.

The following Departments reported their organization.

Department of Natural History.

Hon. LEVI WOODBURY, Secretary of the Treasury, Chairman.
Col. Jos. G. TOTTEN, Vice Chairman.
Col. G. TALCOTT, Secretary.

Department of American History and Antiquities.

PETER FORCE, President,
THOMAS HARTLEY CRAWFORD, Vice President.
FRANCIS MARKOE, jr., Corresponding Secretary.
PISHEY THOMPSON, Recording Secretary.
ALEXANDER DIMITRY, Librarian.

Department of Agriculture.

ROBERT BARNARD, Chairman.
A. DIMITRY, Secretary.

Mr. George Flower, of Illinois, read a communication on the 'Cottage, or Domestic cultivation of the beet root.'

Dr. H. King, of Missouri, communicated information respecting the discovery of Fossil bones in Missouri.

Stated Meeting, August, 10, 1840.

Present, thirty-one members.

Hon. JOEL R. POINSETT in the Chair.

The following donations were received:

A collection of Fossil shells, and a specimen of Selenite, from St. Mary's river, Maryland.—*From Pishey Thompson.*

Specimens of Zinc and Copper ores from Missouri.—*From Governor Miller, of Missouri.*

'Farmer's Letters,' printed in 1744, by John Dickinson, of Philadelphia.—*From Peter Force.*

The following Departments reported their organization:

Department of Geology and Mineralogy.

Col. J. J. ABERT, Chairman.
Dr. THOS. P. JONES, Vice Chairman,
A. O. DAYTON, Secretary.

Department of Chemistry.

Dr. THOS. P. JONES, Chairman.
A. O. DAYTON, Vice Chairman,
H. C. WILLIAMS, Secretary.

Department of the Application of Science to the Arts.

Dr. THOS. P. JONES, Chairman,
H. C. WILLIAMS, Secretary.

Department of Literature and the Fine Arts.

ALEX. MACOMB, Maj. Gen., U. S. A., Chairman.
ROBERT GREENHOW, Secretary.

Dr. H. King, of Missouri, presented a paper containing "Directions for making collections in Natural History." Ordered to be printed.

The following circulars were read:

From Mr. Poinsett to the officers of the Army, at distant posts, asking their aid, and pointing out the manner in which

they might be useful, in carrying out the objects of the Institution;

And, from the Corresponding Secretary, notifying Corresponding Members of their election, and soliciting their co-operation.

The Department of Geology and Mineralogy was requested to make a Geological and Mineralogical survey of the District of Columbia; to cause a Geological Map to be executed, and a suite of Specimens to be prepared for the Institution.

The Department of Natural History was requested to prepare catalogues of the Animals and Vegetables of the District of Columbia, and to collect specimens.

Stated Meeting, September 14, 1840.

Present, twenty-three members.

Hon. Joel R. Poinsett in the Chair.

The following donations were received:

A specimen of '*Fucoides Alleghaniensis*,' from the Gap in Wills' Mountain, near Cumberland, Maryland.—*From J. H. Causten, jr.*

Iron and Copper ores from West Stockbridge, Massachusetts.—*From Hon. Gouverneur Kemble.*

Selenite, Marl, Fossils, &c. from St. Mary's river; Argillaceous oxide of Iron, from Piney Point, Maryland; and a Bottle, incrusted with Balani, from the bed of the Potomac, 70 miles below Washington.—*From Pishey Thompson.*

Two publications on the Daguerreotype, by J. Monticello, of Naples.—*From the Author.*

Geological Survey of Virginia, 1839. By Professor W. B. Rogers.—*From the Author.*

MS. Collection of one hundred papers and documents, consisting of a series of Proclamations, Correspondence, Addresses, Garrison and Police orders, &c., illustrating the History of South Carolina, from the capitulation of Charleston,

May 12, 1780, to the resumption of the State Government, and meeting of the Assembly at Jacksonborough, January 18, 1782. Compiled by Peter Force.—*From the Compiler.*

Donation of $50.—*From Dr. Wm. Rush, of Philadelphia.*

Special Circulars were read, which had been addressed to the Governors of States, and to the Diplomatic and Consular Representatives of the United States, in Foreign Countries, announcing that they had been made Corresponding members, and inviting their aid in the promotion of the objects of the Institution.

Stated Meeting, October 12, 1840.

Present, twenty-nine members.

Hon. Joel R. Poinsett in the Chair.

The following donations were received:

Mineralogical and Geological specimens.—*From Dr. F. Hall, Lieut. M. C. Meigs, Dr. McWilliams, Mr. H. C. Williams, and Colonel Talcott.*

Specimens of the *Turbo littoreus*, West River, Maryland.—*From F. Markoe, jr.*

Recent Shells, found within a circuit of five miles around the city of Baltimore, from the Cabinet of Dr. Foreman.—*From Dr. E. Foreman, Professor of Chemistry, Washington College, Baltimore.*

Map of Saxony.—*From Hon. J. R. Poinsett.*

Memoranda of Observations, made to determine the Latitude of Alexandria, D. C., and the difference of Longitude between it, and the Observatory on Capitol Hill, Washington.—*From the Author, Lieut. J. M. Gilliss, U. S. Navy.*

A communication was directed to be made by the First Director to the Geographical Societies of London and Paris, informing them of the establishment of the National Institution, and soliciting their correspondence.

The Departments of the Institution were requested to collect, without delay, "all Reports made by Committees of Congress, and by Executive officers of the Government, illustrating the Geography, History, Geology, Manufactures, Commerce, &c., of the United States."

Stated Meeting, November 9, 1840.

Present, thirty-nine members.

Hon. Joel R. Poinsett in the Chair.

The following donations were received :

Tooth of a Mastodon, found in Arkansas.—*From Col. J. H. Hook, U. S. A.*

Specimen of "Bird's eye Marble," or Encrinital Limestone, from Iowa city.—*From Mr. Newhall.*

Map of the Empire of Russia.—*From Hon. J. R. Poinsett.*

Fossil Specimen, from the Tunnel of the Chesapeake and Ohio canal, at the Paw-paw Bend, in Alleghany county, Maryland.—*From Robert Barnard.*

Collection of Pamphlets, relating to the Revolution in 1776.—*From Robert Barnard.*

Specimens of the Printing used in teaching Reading and Music to the Blind.—*From J. H. Causten, jr.*

Geological and Agricultural Survey of Rhode Island, by Dr. C. T. Jackson.—*From the Author.*

Volume of Ancient Maps.—*From Colonel James Kearney, U. S. A.*

History of Embalming, by J. N. Gannal, translated by R. Harlan, M. D., Philadelphia.—*From the Translator.*

Recent Shells.—*From Isaac Lea, Philadelphia.*

Paper on "the Oolitic formation of America," read before the American Philosophical Society May 15, 1840, by Isaac Lea.—*From the Author.*

Synopsis of the Family of the Naiades, by Isaac Lea.—*From the Author.*

Contributions to Geology, by Isaac Lea.—*From the Author.*

Pamphlets on Scientific subjects, by Walter R. Johnson, Philadelphia.—*From the Author.*

Discourses on Scientific subjects, by R. Dunglison, M. D., One of the Secretaries of the American Philosophical Society, Philadelphia.—*From the Author.*

Act of Incorporation, By-Laws, and Catalogue of the Library of the Academy of Natural Sciences, Philadelphia.—*From the Academy.*

Work on the Fossil Shells of the Tertiary Formations of North America, illustrated by figures drawn on stone from Nature. By T. A. Conrad. Vol. I.—*From the Author.*

Copper, Zinc, and Lead ores, Barytes, &c., from the Perkiomen Mines, near Philadelphia; and Chromate of Iron from the Island of Cuba.—*From Richard C. Taylor, Philadelphia.*

Jeffersonite, in large crystals. Garnet, a very large crystal. Automalite, from Franklin, New Jersey.—*From Isaiah Lukens, Philadelphia.*

Collection of Geological specimens, Minerals, Ores, Fossils, Indian relics, &c. with a descriptive catalogue.—*From Francis Markoe, jr.*

Fauna Columbiana, by T. B. J. Frye, M. D. in MS.—*From the author.*

48 Specimens of American wood.—*From John Lenthall, Naval Constructor, Philadelphia.*

A letter was read from Alexander Maclure of New Harmony, Indiana, offering a suite of Geological specimens, Minerals, &c. from the Cabinet of his deceased brother, William Maclure, late President of the Academy of Natural Sciences of Philadelphia; also, the following letter from the venerable Mr. Du Ponceau, President of the American Philosophical Society, and an honorary member of the National Institution.

PHILADELPHIA, *November*, 1840.

TO FRANCIS MARKOE, jr.

Corresponding Secretary of the National Institution.

MY DEAR SIR: I have read with great attention and pleasure the constitution and by-laws of the National Institution, which you have had the goodness to com-

municate to me. I assure you that I feel the liveliest interest in the success of this noble institution. I am happy to see it established in the city of Washington, the capital of our Union, and many reasons induce me to feel this satisfaction. The District of Columbia is deprived of the most important rights enjoyed by the States. Its inhabitants are in fact disfranchised, and do not enjoy the right of self-government; a compensation is due to them for this great sacrifice, and there cannot be a nobler one than the laurel crown of science, which I think our National Government is bound to give to them, for their and its own glory. When our Government shows a sincere disposition to promote science and general knowledge, without which no free nation can long exist, it will produce many excellent effects; it will promote confidence in the National Administration; and, above all, it will soften the rage of party spirit, which threatens to involve us in the fate of the Roman Republic.

The details of your organization are of little consequence, as they may be altered by the institution at pleasure. Yet there are some principles by which I think they ought to be regulated, and which I shall take the liberty to explain to you Every institution of this kind ought, in my opinion, to be constituted with a view to its efficiency and its perpetuity. These should not be lost sight of in any, even the most trifling, of its regulations. Efficiency is the first, because from its continued action perpetuity will arise and follow as a natural consequence. Experience will show you whether your constitution is or is not deficient in regard to this most important principle. The choice that you have made of your directors is a most excellent one, and I have no doubt will be attended with the happiest consequences. You have chosen two men high in office, whose means of assistance are considerable, and whose patronage will be important to you. I do not speak of their personal qualifications; they are well known to the world. One of them is already highly distinguished as a patron of science; of this I can speak of my own knowledge, as the American Philosophical Society, amongst others, is greatly indebted to him, and has placed him in the list of its benefactors. You have therefore done wisely in obtaining from the heads of the Government that they should appear as the head of your Institution. It is to be regretted that the Chief Magistrate of this great nation does not occupy that position in regard to this institution which the world will naturally expect from him, and which might enable him to be so eminently beneficial to his country.

I however cannot but highly approve of your choice of directors; but you must be sensible that men who, like them, have on their shoulders, in a great measure, the destinies of their country, cannot give much attention to the official duties which you have imposed upon them. It is from a higher sphere that they must govern your institution. I would, therefore, recommend that you should elect two or three vice directors, to save them the labor which a regular attendance on your meetings would require of them. That attendance should be free and voluntary, and I have no doubt that, left to themselves, they would make every exertion, particularly in the inception of your labors, to direct and promote them. They will have to keep up a correspondence with other learned societies at home

and abroad; and I would suggest that, by way of a beginning, they should write to those of America, soliciting their correspondence.

Amongst the officers of your society, those of whom most activity is expected are your secretaries. You will, therefore, of course, choose none to those offices but the most active, zealous, and capable of your members. But all must put their shoulders to the wheel, particularly in the beginning, and until the institution is well established and consolidated.

That will be the work of time. Your institution embraces the whole circle of human science; therefore there are innumerable sources from which you may expect aid. But that aid is at first difficult to be obtained. I wish, therefore, you would think of some method to obtain it. The American Philosophical Society has found great benefit from the publication of a periodical bulletin of its proceedings, which is disseminated through all the learned world. Before that, they found much difficulty in obtaining communications from the learned, to be inserted in their transactions. The reason was, that it was not known how soon those communications might appear before the world. Fame, next to the consciousness of doing good, is the best reward of men of science, and they love to see their names and their productions made known to the public; but now, although some time elapses before their articles are published at large, yet, as they are noticed, and a short analysis given of them in the Bulletin, this satisfies them so well that the society are never at a loss for materials for publication. Your society might not probably publish those bulletins immediately, on account of the expense; but some sketches of your proceedings might appear, from time to time, in one of your papers, so as to keep your institution always before the world, which appears to be necessary for its continued existence.

As I have spoken of expense, I must now touch upon a subject which appears to me of the highest importance, and of which it might, perhaps, be thought presumptuous in me to speak. I doubt much whether you can ultimately succeed without the aid of the Government. Were there nothing but your current expenses in the printing of your Bulletin, and ultimately of Transactions, which I hope you have in view, money will be indispensably wanted. I have, in the beginning of this letter, explained that I think the Government is interested in assisting you, and I believe that they have the means fully in their power. I have always been of opinion that it was such an institution as yours, at the seat of Government, that Mr. Smithson had in view when he made his munificent legacy to the United States. He could not mean, in my opinion, that his money should be applied to the promotion of any specific branch of knowledge, much less to the foundation of a School or an Academy. His views were more extensive. He wished to promote Science in all its branches and departments, and, therefore, he wished his institution to be fixed at the seat of Government; from whence, as from a centre, the rays of Science might be diffused throughout the whole country. And, therefore, Congress cannot find a better opportunity to execute the will of that beneficent testator than by laying hold of your institution, and making it its own.

Here let me be understood. I do not mean that Congress should immediately

put into your hands the large legacy of Mr. Smithson, to erect with it grand buildings, make a great parade, and fail in the end as so many others have done. That cannot be expected to be done until your society has become firmly established on a solid basis, and has acquired that high reputation which I hope it will always have in view in the learned world; but, in the mean time, Congress might, out of the interest, aid your exertions in proportion to your progress, and, at least, in the beginning, enable you to make those publications without which you cannot well expect to proceed. Thus your institution would grow under their fostering hand, and, in process of time, the great design of Mr. Smithson would be completely fulfilled. I say, in process of time, for time will certainly be required, before you can rise to the rank in science which you may justly keep in view. In my opinion, you should not attempt too much at once, but proceed gradually and systematically, being satisfied with every year showing to the world some progress, but not imagine that your institution, as I hope it will one day be, will come out at once, fully armed, like Minerva from the head of Jupiter. Trust, therefore, to time, but let it be aided by your zeal, your activity, and, above all, by your energy. Energy is the soul of all great undertakings, but it must be continued, and never suffered to flag.

Here you have, in as brief a space as I could condense them, my opinions, my wishes, and my hopes. Let me, therefore, conclude with the wish of father Paul, which, alas! was not fulfilled as to his Republic, but I hope will apply with more truth to your institution, "ESTO PERPETUA!"

I am, with great regard and esteem,

PETER S. DUPONCEAU.

Stated Meeting, December 14, 1840.

Present, thirty members.

Hon. JOEL R. POINSETT in the Chair.

The following donations were received:

The Journal of Natural History. Published by the Boston Society of Natural History. Vol. 3, No. 3. (On motion of the Hon. LEVI LINCOLN.)—*From the Society.*

Catalogue of the Library of the American Antiquarian Society. Boston.—*From the Society.*

Transactions of the American Antiquarian Society. Boston.—*From the same.*

Specimen of the wood of the Aloe Tree. Palm nuts from Liberia.—*From G. R. Barry, U. S. Navy.*

Lignite from the mouth of Magothy River, Maryland.—*From Francis Markoe, jr.*

History of Tripoli; its present condition, &c. By Robert Greenhow.—*From the Author.*

"Synopsis of the Organic Remains of the Cretaceous Group of the United States," and three Scientific pamphlets. By S. G. Morton, M. D.—*From the Author.*

Catalogue of the Library of the Academy of Natural Sciences. Philadelphia.—*From the Academy.*

Twenty-four Roman, Moorish, and Arabian Coins, found near Velez Malaga. Spain.—*From G. Read Esq., U. S. Consul at Malaga.*

Pamphlets on Scientific Subjects, by the Chevalier A. B. de Mascarenhas, Portuguese Consul, &c. Bristol, England.—*From the Author.*

A collection of Trap Rocks, from Virginia.—*From H. C. Williams.*

Specimens of the Red Sandstone of Connecticut, containing impressions of the feet of Birds, &c. &c.: the Ornithichnolites, &c. &c., of Professor Hitchcock.—*From Col. Talcott, U. S. Army.*

The following letters were read. From Isaac Weld, Esq., of Dublin, honorary Secretary of the Royal Dublin Society; and from Lieut. Wm. F. Maury, U. States Navy:

ROYAL DUBLIN SOCIETY, 30TH OCT. 1840.

TO FRANCIS MARKOE, Jr., Esq. *Corresponding Secretary, &c.*

SIR: Absence from Dublin must be my apology for not having sooner acknowledged your letter of the 22d August last, informing me that I had been elected a corresponding member of the National Institution for the Promotion of Science, established at Washington. I beg to assure the members that I feel grateful for the favorable sentiments they have been pleased to entertain towards me on this occasion, and that I esteem it a high honor to belong to the Institution.

We have in Dublin two institutions for the more immediate promotion of science—the Royal Irish Academy and the Royal Dublin Society. I have been a member of each for forty years past, but it is of the latter body that I am Honorary Secretary.

The Academy instituted in 1786 devotes itself to Science, Polite Literature, and Antiquities. Original communications are received and read, and those most ap-

proved of are published in the Transactions. The Royal Dublin Society takes a different range, and is a much older body. The charter for its incorporation was granted nearly a century ago; and the Society had existed for many years before, as a private body. As it possibly may not be altogether uninteresting to the members of your Institution to be made acquainted with the establishments of the Royal Dublin Society, I shall endeavor to give a succinct view of them.

I. A Botanic Garden, founded about the year 1790, containing twenty-seven English acres, with extensive ranges of Conservatories, all maintained in very beautiful and efficient order. Besides the main compartments, for the exposition of the Linnæan system of plants, others are devoted to the experimental cultivation of useful plants in relation to agriculture, &c. A Professor, Dr. S. Litton, resides at the Garden, who delivers lectures there, in the season, at an early hour of the morning, which are most numerously attended; and other lectures at the Society's theatre in Dublin. All the lectures and all the public instruction delivered under the auspices of the Society are free to the public, without any charge whatsoever; but the Professors are permitted to receive fees from private pupils, when they offer.

II. An extensive Chemical Laboratory and dependencies, well provided with apparatus, under the superintendence of Professor Davy, a cousin of Sir Humphrey, who delivers lectures.

III. Department of Mineralogy and Geology, under Professor D. Scouler, About the year 1790, the Society purchased, at an expense of about £1,500, the celebrated Cabinet of Minerals formed by Leske, a favorite pupil of Werner, consisting of upwards of 7,000 specimens, each of which is elaborately described in a printed catalogue for the benefit of students. The arrangement of this Cabinet has been allowed to remain in its original state; but other series of minerals have been arranged on later and improved systems, and detailed catalogues have been printed, for explanation and study.

IV. A general Museum, also under the care of Dr. Scouler. With the annual augmentations of subjects, more room has become necessary, and the foundation has already been laid of a new edifice for the express purpose. The Museum is open to the public on certain days in the week, and is usually visited by from 20,000 to 30,000 visiters in the course of the year.

V. Department of Natural Philosophy and Mechanics, provided with valuable instruments and models, under Professor Kane, M. D. who delivers lectures.

VI. Four Schools of Design. 1. For the study of the human figure. 2. For the study of general ornament. 3. For the study of architecture and plain drawing. 4. For the study of modelling in clay.

There is a different master for each school, and each school is open, in rotation, for three hours, on three alternate days in the week, 9 to 12, and 12 to 3. These schools have been established for fourscore years, and since their first opening have never failed to send forth young men who have become distinguished in the British school of arts. At the present day may be enumerated Sir Martin Archer Shee, President of the Royal Academy of Painting in London; Mr. Behnor, the cele-

brated Sculptor, who made the beautiful statue of Dr. Babington, in St. Paul's, London; Mr. Danby, &c.

We have a fine and capacious gallery for plaster casts after the antique, and which is freely opened to students properly recommended. In the elementary schools an aptitude for drawing is the only recommendation required. There are annual exhibitions of the performances open to the public, and prizes for the best.

VII. An extensive and valuable Library, deposited in a magnificent room, with minor apartments connected therewith, and which is yearly becoming more valuable by the new purchases. Though, of right, open to members alone, yet it is always easy of access by introduction.

VIII. The Agricultural Department—for which an apartment of 230 feet in length is now nearly completed—for the exhibition of useful implements, models, &c. &c. A Veterinary Anatomical museum is attached to it, and lectures delivered. In the spring, there are exhibitions, for prizes, of the finest breeds of animals—the celebrity of which brings over many persons from England and Scotland.

IX. Triennial exhibitions of Irish manufactures and productions.

X. Monthly evening scientific meetings, to which persons not members are admissible by tickets, and at which papers are read (coming from any quarter) which have received the approval of a committee of inquiry: those of peculiar interest are published.

It will readily be conceived that an establishment of the nature described must require considerable funds for its maintenance; and besides the subscriptions and admission fees of members, we receive annually from Parliament the sum of £5,600, or thereabouts. The Irish Parliament, during the latter years of its existence, granted annually £10,000 former Irish currency, which was as 108½ to 100 British; and for several years a similar grant was made to us by the Imperial Parliament, but the amount was afterwards gradually reduced to our present allowance of £5,600. I may be permitted to explain, also, that this reduction was not founded on any alleged misapplication of the public funds placed at the disposal of the Royal Dublin Society—for all the accounts are rigorously investigated by the commissioners of public accounts—but purely in a spirit of economy and reduction of the national expenditure, from which other public institutions, even those established for charity, suffered at the time equally with ourselves. I have combatted this parsimonious spirit, as bearing upon our scientific institutions, with some earnestness, and at sundry times, but in vain.

It is the boast of our Society, that our superb palace, purchased from the Duke of Leinster about thirty years ago at the price of £20,000; our theatre, capable of containing nearly 13,500 people; our laboratory and philosophy rooms; our drawing schools, and statue gallery since added, have been all the fruits of our individual subscriptions and fees, and not derived from any part of the national funds, which are solely devoted each year to the great objects for which the Society was incorporated—the promotion of science and the useful arts.

I have been led further than I anticipated, and fear I must apologise for having trespassed on your patience. In conclusion, permit me to express my earnest

wishes for the prosperity of the Washington Institution, and the continued prosperity of your great and increasing nation.

I have the honor to be, sir, your most obedient servant,

ISAAC WELD.

Letter from Lieutenant Maury.

To FRANCIS MARKOE, JR., Esq.,

Corresponding Secretary of the National Institution.

FREDERICKSBURG, (VA,) DEC. 5, 1840.

SIR: Be so good as to convey to the members of the National Institution for the Promotion of Science, established at Washington, my acknowledgments of the honor of being elected a Corresponding Member of the Institution.

The favorable auspices under which this Institution has commenced, and the peculiar advantages which it possesses in the zeal and commanding influence of its Directors, and many of its members, give to Science the promise of an abundant and rich harvest from the sea as well as from the land.

To explore the bottom of the ocean along our own coasts, in search of submarine forests, beds of shell-fish, and other treasures of the deep, would be a magnificent undertaking. The field there presented, is rich and rare; and among the more obvious advantages for making collections, the facilities enjoyed for turning laborers into this field have doubtless not escaped the attention of the Institution. The officers of the West India squadron, and, I doubt not, those too of the revenue service, have willing hearts and ready hands. They have but to learn how, consistently with their duties, they may promote the objects of such an Institution. The fifteen or twenty revenue cutters along the seaboard, if furnished with "*drags*" to "*troll*" the bottom in light winds, would greatly promote the objects of the Institution.

Not many years ago, the late Admiral Sir ISAAC COFFIN, R. N. had it in contemplation to endow three Naval schools in Massachusetts. He actually made a Will to that effect. Each school was to be furnished with a vessel, in which the pupils were to cruise four months of every year, *trolling* from Maine to Long Island, in search of "unknown or hidden treasures of the deep." Though the Admiral was afterwards induced to annul this Will, the provision of it alluded to above shows the importance which that distinguished officer attached to exploring the bottom of the sea.

Any one who contemplates for the first time the marl beds of our tertiary formation is filled with amazement at the multitudinous remains of the animal kingdom which he there beholds. In wonder, he asks himself, when and where lived these vast quantities of animals? Yet were this observer familiar with the bottom of the sea for a few leagues along the Atlantic coast, his wonderment would be turned rather from the past to the present—for he would there find the bottom composed, for miles together, of shells, whose genera and species yet live, and inhabit the unexplored caverns of the sea. Many of the bars and shoals along the Southern coast are formed almost entirely by such shells. Yet so entirely unexplored are the habitations of their living types that even the fisherman is a stranger to them.

In 1825–'6, when Gen. Rodil was besieged in the castles of Callao, and the port was blockaded, the men-of-war that were there turned their attention, for the want of a market on shore, to the resources of the harbor itself. H. B. M. ship Briton resorted to the expedient of *trolling* the harbor for shell-fish, and discovered banks of them. One of the greatest delicacies to be found now in the excellent fish market of Lima are the *Britones* of Callao, (so called in honor of the vessel.) Although the fishermen of Callao and Lima had been almost in the daily habit of fishing over these banks for two or three hundred years, it was not known, except by a dead shell cast up here and there on the beach, that such a shell-fish was to be found in the waters of Peru. This fact is mentioned to show how little is known of the bottom of the sea, even at those points which are most frequented.

If those vessels which use the *troll* could be induced to keep a record of their labor, such records would, in the course of time, enable the Institution to construct a chart of the coast, showing the unproductive from the fruitful and habitable parts of the bottom of the ocean—a work which would have the merit of being both useful and new.

I have the honor to be, &c.

M. F. MAURY, U. S. N.

A letter to the American Philosophical Society of Philadelphia was read, announcing officially the existence of the National Institution, and asking its correspondence; and the reply of the Society, accepting with pleasure the offered correspondence, and stating that directions had been issued to furnish the Institution with the printed proceedings of the Society, and its future Volumes and Transactions.

And a letter from J. W. Vandenbroek, Consul of the United States at Amsterdam, offering specimens of the Birds of Holland, for the Cabinet of the Institution.

Stated Meeting, January 1, 1841.

Present, thirty-one members.

Hon. Joel R. Poinsett in the Chair.

The following donations were received:

Abridgment of the Transactions of the Royal Society of London from 1665 to 1744, in 6 vols., 4to.—*From Thomas Gilpin, Philadelphia.*

Fifty-five genera of recent and fossil shells, comprising 117 species.—*From Col. J. G. Totten.*

Specimen of shelly concretion, used as building-stone at St. Augustine, Florida, and a portion of a Mastodon tooth from Glynn county, Georgia.—*From the same.*

Specimens of crystallised Sulphuret of Silver, and Carbonate of Lime, from Mexico.—*From Don Velasquez de Leon, one of the Mexican Commissioners.*

Boylston Prize Essays, by Dr. Parsons, of Providence, Rhode Island.—*From the Author.*

Silicified wood; Galena, from Nashville, Tennessee; Quartz, from Tybee Island, Georgia.—*From G. Gaither.*

Splendid specimen of crystallised Carbonate of Lime, from Wyer's Cave, Virginia. Gold ore, from Spottsylvania county, Virginia.—*From his Excellency Martin Van Buren, President of the United States.*

The First Director reported that, agreeably to the desire of the members, he had invited several literary and scientific gentlemen, in this and other cities, to deliver lectures before the National Institution.

General Macomb, from the committee appointed to make arrangements for the first annual meeting, reported that the Hon. Joel R. Poinsett had consented, at their request, to furnish for publication a copy of the Discourse pronounced by him on the 4th instant, the anniversary of the National Institution. From the Discourse the following extracts have been made:

Extracts from the Discourse of the Hon. J. R. Poinsett, First Director, on the objects and importance of the National Institution.

"The lovers of Science, Literature, and the Fine Arts, residing in this District, felt sensibly the absence of those resources which are found elsewhere, and are necessary for the attainment of knowledge. They were mortified to perceive that the great advantages possessed by the public authorities at Washington were neglected, and that, at the seat of Government of this great nation, there existed fewer means than in any other city of the Union of prosecuting those studies, which, while they impart dignity and enjoyment to existence, lead to the most useful practical results. They believed it to be their duty to arouse the attention of Government to these deficiencies, and, at all events, to address themselves to the task of supplying them, as far as could be done by their individual and combined

exertions. For these purposes they have formed an association, and applied themselves to collect specimens of Geology and Mineralogy, and other objects of natural history, and, for the short period of its existence, the efforts of the Institution have been eminently successful. They have entered into correspondence with other learned Societies, and have been encouraged to proceed by their approbation, and have profited by their generous co-operation. They have invited the assistance of their fellow-citizens in the most distant States and Territories, and hope, by their aid, to collect documents and facts illustrative of the early history of our country, specimens of its Geology and of its Mineral and Vegetable productions, and, if not to preserve the animals and plants themselves, which are passing away before the progress of settlement and cultivation, at least to perpetuate their forms, and the memory of their existence. They hope to be able to illustrate these subjects, and others connected with them, by a series of gratuitous lectures, and entertain a confident expectation that numbers, whose duties compel them annually to assemble here, will view with interest collections of the natural productions of America, drawn from every State and Territory in the Union, and, becoming sensible of their utility, will contribute on their return to swell their amount, and to spread throughout the country a taste for literary and scientific pursuits.

"The Institution for the Promotion of Science and the Useful Arts, will, as its name indicates, embrace every branch of knowledge; and its members, believing such a combination essential to its success, have divided themselves into eight scientific classes, namely: Astronomy, Geography, and Natural Philosophy; Natural History; Geology and Mineralogy; Chemistry; the application of Science to the Useful Arts; Agriculture; American History and Antiquities; and Literature and the Fine Arts."

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"At no epoch of history has Astronomy, both theoretical and practical, counted among its votaries so many illustrious men, as since the commencement of the present century; at no period has the vault of heaven been explored with so much genius, profound knowledge, ability, and physical means, as at this day; and never has been commenced a monument to the glory of science and human intellect more sublime than that of which astronomy is now laying the foundation. Shall we not add one stone to this structure? Will we expose ourselves to be denied our just title of a moral, religious, intelligent, and enlightened people, by refusing to inscribe the United States of America among the names of the civilized nations of the earth which will be found engraved upon the columns of this magnificent temple? Are we not a Navigating and Commercial people? Does not our flag float on every sea, and visit every accessible region of the world? And shall we not have our National Observatory, our astronomical archives, and our celestial ephemeris? Shall we any longer leave our navigators exposed to the disgrace of acknowledging that, without the astronomical ephemerides published in Europe, they could not with safety navigate distant seas? I hope not. I believe it to be only necessary to point out to the intelligent people of this country the

usefulness, not to say the necessity of such an establishment, for them immediately to appreciate the object, and, so far as the powers of the Government extend, to furnish the means to carry it into effect. I am aware that this has already been ably done in a report on the proper application of the Smithsonian bequest, presented to Congress, at its last session, by a gentleman with whom I am happy to be associated in promoting the progress of science. His long continued efforts to establish a National Observatory will, I trust, be finally crowned with success, and I shall always reflect with satisfaction on having, on the first occasion that presented itself, seconded, however feebly, his liberal and enlightened views.

"Second to Astronomy in its importance to the wants and interests of Navigation, and essential to those of commerce, is Geography; a science which equally requires the fostering care of Government. In this respect it has been more fortunate than Astronomy. The expedition of Lewis and Clark, undertaken by direction of Mr. Jefferson, and destined to explore the route across the Rocky Mountains to the Pacific Ocean; that of the brave and gallant Pike; and those under that enterprising officer and accomplished observer Long, still further to examine that portion of our territory; the coast survey which is now in progress under the learned and accurate Hassler; the exploration of the country lying between the Missouri and Mississippi rivers by that indefatigable and scientific traveller Nicollet; and the expedition under the command of Lieut. Wilkes, intended to explore unknown seas, to discover new sources of commercial enterprise, and to point out the dangers which beset the path of the navigator, while it sweeps from the charts those islands and shoals which have no existence, save in the imagination of former hydrographers; have been fitted out and supported by the Government, and have attracted the favorable notice of scientific men throughout the world. The Geographical Society of France speaks, by its President, of that expedition in the following terms: 'In calling your attention to the voyages round the world, and to other maritime enterprises which have, in our time, so largely contributed to the establishment and progress of geography, I have to observe, that it is no longer from our old Europe alone that these great expeditions set forth. The new world now rivals the old. The Government of the United States of America—of that nation which, in less than half a century, has taken a prominent station among the maritime powers—sends out, in its turn, an exploring expedition towards the Antarctic pole.' There is every reason to hope that the results of this expedition will prove as useful and honorable to the nation as its conception was creditable to its authors. It is a remarkable fact, that three national expeditions on voyages of discovery and for purposes of science, were traversing the same ocean at the same period: the American and French squadrons being in sight of each other, in a stormy sea, on an unknown and ice-bound coast, and striving with each other for the honorable distinction of priority of discovery. We await with impatience the rich harvest of new scientific observation and physical facts which the return of our exploring squadron will bring us. Much, however, remains to be done for the advancement of geography in our country. The vast inland seas which form our northern boundary, covered as they are with vessels, and teeming with commerce, have

never been explored by the hydrographer. The navigator sails over them with dread, for there exists no chart to warn him of the dangers he may encounter; and the works erected by Government along their shores, for refuge in times of storm, are too incomplete to answer the purpose. As to the interior of our country little is known scientifically and accurately. It may be said that it is the province of the States to construct maps of their several territories. It may be so, but without some common centre, from whence uniform plans and instructions issue, State maps will be laid down upon different projections, and be wanting in astronomical accuracy. A map of the United States, to be useful, ought to be constructed upon a uniform plan, and under the immediate direction of the scientific officers of the United States. Such a work is required by the best interests of the country. Its completion would develop the vast resources of our extensive possessions, enable the Government to comprehend all their relative advantages, and to open new avenues of commerce. It would aid the emigrant in his search after advantageous settlements, direct the merchant to the readiest route for the transportation of goods, teach the farmer where to seek a market for his produce, point out to the soldier whence to draw his supplies, the shortest lines of communication, and the best sites for encampment, or for the erection of permanent works of defence. In short, such a work would be eminently useful to all classes of our fellow-citizens, and contribute largely to the commerce and security, and to the rapid settlement and improvement of our country. All the Governments of Europe have been sensible of the importance of geographical knowledge, and trigonometrical surveys of every empire and kingdom are completed or in progress there. In those countries geography was first cultivated for warlike objects; their maps were originally military, and many of them are constructed with such minute accuracy, that armies may march and encamp, and sentinels be posted, with no other knowledge of the country than such maps afford. With their aid alone positions are chosen, and all the chances of war calculated in the closet as on a chess-board. By their means the statesman can determine on the expediency of opening a canal or of constructing a road, and becomes possessed of a perfect knowledge of the climate, the structure, and the physical resources of the country, the interests of which it is his duty to watch over and protect. We are without any of these advantages; our maps are so inaccurate, that large amounts are sometimes wasted in attempting to construct roads and canals which are found to be impracticable, or which lead to no beneficial results when executed. So important is this branch of science considered, that the Governments of Europe have depôts of maps from the earliest ages, and that of France, especially, possesses an extensive collection, beginning at the thirteenth century. Societies, too, exist in their principal cities, who aid the Government, by preparing instructions for expeditions, whether for purposes of science or exploration, themselves giving premiums for maps and charts, and fitting travellers out at their own expense, and sending them to explore unknown regions. In short, these institutions spare no pains to encourage and promote the ends of science, and their success has been equal to their zeal."

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"It was proposed at the last session of Congress to establish Magnetic stations, and to institute a series of corresponding observations in the United States. Permanent stations for this end have been established by nearly all civilized nations; and not only have they been extended into Asia, Africa, and America, but expeditions have been undertaken to the Antarctic seas, for the purpose of pursuing these researches. Our exploring squadron was likewise furnished with the necessary instruments, and our officers instructed to avail themselves of every opportunity to make magnetic observations, while similar and corresponding observations were directed, and have been carried on, at Boston and at Washington.

"We trust that the Government of the United States will not withhold its further co-operation, but will enable some of its officers to carry out the views of the learned societies throughout the world, and give its aid to the efforts now universally making to determine, with precision, the laws of terrestrial magnetism."

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"Natural History, Agriculture, Commerce, and the Useful Arts, go hand in hand; wherever the first is encouraged, the other branches, which depend much upon it for their support, will flourish; but wherever it is neglected, or lightly regarded, the other branches languish and lose their value. How many substances of rare materials grow throughout this vast region which are unknown to the United States, but which might become articles of extended commerce, if every State in the Union would seriously set to work to explore its resources in the three great kingdoms of nature.

"It is true that some of the States have set the example of Geological surveys, and have made collections of Mineral and Geological specimens; but what, for the most part, has become of these collections? They are dispersed where neither the Government nor the people generally can make use of them. For the promotion of science and the useful arts, we require a central institution, in which all the natural productions of this vast territory may be exposed to public view, for the benefit of the people, and which may contribute to the advancement of the sciences, by affording the means of comparison with natural and analogous productions of other parts of the world."

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"It is to the study of the zoology of America that the efforts of the Institution ought to be chiefly directed. No other country presents greater or more interesting varieties in the animal creation, and none more abounds in fossil remains. Many of the former are fast fading away before the hunters and trappers, who pursue them for food or for furs; and their extinction will solve the important problem, whether the hunter tribes can become purely agricultural, and maintain themselves by the sweat of their brow. The red man of our forests, and the hunter tribes of South America, are, as far as I have been able to observe, different from the agricultural Indians that inhabit Mexico, Peru, and Chile. The former are the descendants of uncivilized men, hunters like themselves, and whether they are susceptible of the moral culture of the agricultural race, remains yet in doubt; the latter, on the contrary, have tilled the earth, and subsisted on the product of their

labor from time immemorial. Physically and morally these two classes have always appeared to me widely different, and I have doubted their having a common origin. The aborigines of Mexico, Peru, and Chile, were found by their European conquerors in a high state of civilization. In their knowledge of the useful arts, except the art of war, they equalled their invaders, and their agriculture was carried to great perfection, for Indian remains of extensive works of irrigation are still to be found in those territories. There exists evidence, likewise, of their having been inhabited, for centuries before the conquest, by a race still more highly advanced in the arts of life; and even within our own limits, the tumuli of the West denote the existence in that country, at one period, of a superior race to that which the first white settlers found there. These are subjects which it is expected will engage the attention of the Institution, the examination of which cannot fail to shed light on our early history.

"Geology assumes in this country a greater interest than elsewhere, from the vastness of the region, from the great extent of its contiguous formation, and from its being a comparatively unexplored field for scientific investigation. It is important to ascertain whether this portion of the world has, like that already examined, been subjected in its creation to great general rules of construction, or, if that order has been departed from, to know in what particulars. Such investigations have already been carried to some extent, but the results are not universally known; and the geologist cannot ascertain, with any precision, the laws which govern the formations of this portion of the earth, and the relative order of their distribution, without some central place where specimens may be deposited, facts reported, and all necessary information obtained. Sensible of the advantages to be derived from conferring together to compare facts and mutually to correct theories, the geologists of the United States lately assembled at Philadelphia, and separated, it is understood, with the intention of meeting annually. Wherever such combinations exist, they have produced the most beneficial results; and the existence of a museum of natural history here, will render Washington the most desirable place of meeting for the scientific associations of the Union."

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"Indeed, the knowledge of Geology contributes, in an essential degree, to all the useful arts; and it is obvious that collections of geological and mineralogical specimens, brought from every part of our country and rendered generally accessible to the people of the United States, being exhibited at the seat of Government, will tend to the advancement of knowledge, and its diffusion among our fellow-citizens."

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"There is still something wanting to give to the science of Mineralogy that further practical usefulness for which it is so well adapted, and which, in this country, is so much needed. Within the territory of the United States, almost every variety of mineral, useful or necessary to the wants of man, is found in greater or less abundance. In our southern States, gold; in our western, copper, lead, and zinc; and almost in all, iron and coal, in inexhaustible quantities. Chrome, bismuth, antimony, manganese, cobalt, and many others, are known to exist, and

perhaps further investigation will add platina, tin, and silver. But little has yet been done to avail ourselves of these productions. Mining, as a profession, is unknown to us. Educated as agriculturists, merchants, mechanics, or professional men, we pass almost unnoticed these sources of individual and national wealth. The time has surely arrived for turning our attention to them. If we are not to await their slow development under the pressing necessity of our wants, we must begin at once to induce persons to enter on this new pursuit, by educating them for it. Geology and Mineralogy, thoroughly taught, will enable them to undertake the search after these hidden resources with every prospect of success. Geology will point out the places in which they are to be found; Mineralogy will detect them amidst the useless materials by which they may be surrounded.

"It is not to the practical miners of Europe, or of other countries, that we ought to look for improvement in the profession of mining. In so important a matter we must depend upon ourselves. We are capable of accomplishing it, and should not hesitate to set about it. Our people have no superstitious influences to overcome, and while they are free to receive and ready to embrace instruction in other matters, there is no reason why they should not be enlightened in this.

"It is believed that the most powerful agent to effect this beneficial design will be the existence of an extensive cabinet, at the seat of Government, of specimens of Geology and Mineralogy, drawn from every portion of our territory, and so arranged as to present, at one view, all the mineral resources of each particular State, and where these important sciences may be taught by courses of lectures, which, together, will form a school of mining that cannot fail to be extensively useful, and lead to the early and full development of this great source of individual prosperity and national wealth."

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"A certain degree of knowledge in botany is desirable to every one. It leads to a comprehension of the properties and uses of the trees of our forests, and teaches to distinguish wholesome from deleterious plants, as well as to discover those that possess medicinal properties, which abound in our country.

"Although not enumerated among the principal departments of science into which the Institution is organized, the importance of it has not been overlooked. It will be one of the most cherished objects of the National Institution, to establish, at some future day, a Botanic Garden, where plants of every country and every clime may be introduced, and their properties studied."

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"With a view to promote the principal object of its creation, the Institution has devoted one section to the application of science to the useful arts. Technology, the name given to the science which teaches this application, is not found in the encyclopedias and works of a similar character published fifty years ago, and until that period the application of the principles and discoveries of science to the useful arts was not pursued in such a manner as to render it a constituent part of the operations of the manufacturer. The foundation of this science has, however, since then been solidly laid, and in the rapid progress of discovery within that period we

have the promise of a noble superstructure. We are indebted to France for the first impulse given to this pursuit, and it appears, from the late able report of Professor Bache, that Prussia and other Germanic States have established institutions for teaching Technology. The only college in the United States in which courses of lectures on this branch are given, is, I believe, that of Cambridge, in Massachusetts. These have been continued nearly twenty years under a bequest of the late Count Rumford. In the Franklin Institute, also, valuable lectures have been delivered; still but little, comparatively, has been effected towards diffusing this knowledge among the working classes of this country."

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"This Institution has allotted one entire division to Agriculture. This must be considered the most important, as it is the most necessary of the useful arts, as well as the most essential to our existence in a state of civilization."

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"One of the greatest improvements of farming in modern times, so fruitful in improvements of every kind, is the free use of mineral manures. Lime, in some form or other, must enter into the composition of every soil, to render it fertile and where the chemist fails to detect it in the land, he supplies it artificially. A knowledge of the analysis of soils is therefore necessary to every good farmer. The use of mineral manures is beginning to be well understood, and to be generally practised in our country; but there are two things that appear either not to be fully comprehended, or not to be sufficiently brought into successful operation; the one is to make a given quantity of land yield, for a series of years, the maximum amount of produce it is capable of by high culture and a judicious rotation of crops, and the other is the art of irrigation."

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"As a thorough knowledge of this art would more than double our agricultural products with the same labor, this Institution will confer a benefit on their fellow-citizens, by instructing them in the best methods of watering and draining their fields. In the south of Europe canals of irrigation have been constructed by the ablest engineers of the age, and I cannot but think that our own civil engineers would find their account in becoming acquainted with this art, while at the same time they might render an invaluable service to their country."

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"It will be the duty of this Institution, likewise, to use its best endeavors to introduce into our country new varieties of wholesome, nutritious, and pleasant articles of food. With our extended commerce, this duty may be readily performed; and here let me remark, that Agriculture has attained a high degree of perfection only among great commercial nations. The two arts depend mutually upon each other, and the cultivation of the one leads to the extension and advancement of the other.

"In Astronomy, Geology, Minerology, and the various other branches of Natural History and sections into which our Institution is divided, our labors must bear a near resemblance to those of similar societies elsewhere. But the duties that de-

volve upon the department of American History and Antiquities are essentially different from those required in any other quarter of the globe. While in the early history of those nations, the historian, compelled to grope his way through a labyrinth of barbarism, ignorance, and fiction, is bewildered in his search after truth, the light of science, dawning upon the whole course of American History, points out to the careful investigator a safe and illumined path from the great new continent in the South, back to the island of St. Salvador.

"The discovery of our continent; its first settlements; the growth of the colonists in intelligence, wealth, and love of freedom; the triumph over oppression; the establishment of a republican Government, and the subsequent proof of its happy adaptation to the wants of man, are all subjects peculiar to the history of our own nation, and are now being illustrated and treated with equal industry and ability, and by master hands. The documentary history of that Revolution which secured to us and to our posterity the blessings of civil and religious liberty, now being published through the enlightened liberality of Congress, has been collected by Mr. Force, of this city, through whose zeal and untiring industry every document of a public nature has been collected which tended to prepare and carry on that Revolution, and he is gathering together every interesting material calculated to illustrate this great event; while the luminous pages of Mr. Bancroft contain already an admirable account of the early settlement and colonial history of our country, and give promise of a work far surpassing any other that has appeared, in profound research, in brilliancy and beauty of style, and in every quality which can interest and gratify the historian, and secure his confidence in its truth and faithfulness. Both of these gentlemen, I am happy to say, are members of our Institution.

"It will be our province to aid the Societies already formed in the United States in collecting and preserving such materials as may develop and substantiate the truth of the events of our history; and especially will it be our duty to inquire into that of the people we have dispossessed. We are only the settlers of this continent. Who are, and whence came its aborigines? The Indian race, now fading from the earth; their mounds and pyramids, and temples and ruined cities; their various revolutions and states of society, have long been subjects of investigation, and to assist in tracing this mysterious people from their present degraded condition up, through days of glory, to their origin, is a duty that belongs to the department of American History and Antiquities. Fortunately for our infant Institution this department is well composed and well organized. An association of individuals devoted to historical researches, with enlightened liberality, joined the Institution upon its formation, and transferred to it their books, and the valuable records of their transactions. They have since continued their labors under the auspices of this association, and from the industry and intelligence which have hitherto marked their investigations, there is reason to calculate upon results eminently useful to the public and honorable to the institution. These investigations will be essentially aided by the historical researches now making by a very able and distinguished American writer, (if I am rightly informed,) into the records of our sister republic of Mexico."

"The last section, that of Literature and the Fine Arts, cannot be treated worthily without exceeding very much the limits of this discourse. The importance of cultivating and using our utmost efforts to improve the literature of our country, must be apparent to all. It is the vehicle of science, and upon its character the dignity and reputation of a nation depend. It exercises a controlling influence on the public liberties. The patriotic citizen who would, in the forum, or through the press, warn his fellow-citizens of impending danger, or enlighten them on their interests—who would dissipate ignorance, correct error, or reform abuse—must borrow the tones and wield the energies of literature. Our freedom reposes on the guarantee of our political institutions; and who can wrest them from our posterity, with a competent literature to inculcate and vindicate its doctrines and principles; and to proclaim its rights?"

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"*Here*, the people reign—all power is centred in them; and if we would have them not only maintain their ascendency, but use their power discreetly, no expense or pains should be spared to inspire them with a love of literature, and a taste for the fine arts. To effect this, the effort must be made here. It must originate at the seat of Government, and spread from this place over the populous plains and fertile valleys of the land."

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"In a free country, *literature* may and will flourish by the well-directed efforts of individuals; but *the arts* require the protecting hand of Government."

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"In our favored land, they would commemorate the heroic deeds of our forefathers their achievements and sacrifices in the cause of independence, their deep devotion to the freedom of their country. To a certain extent, this has been effected by the liberality of Government; statues have been erected, paintings executed, and medals struck by orders of Congress. Copies of such pictures, statues, and medals, should be spread far and wide over the land, that they may penetrate into every hamlet, and inspire the people universally with gratitude and emulation. From the advancement of the fine arts, we may promise ourselves great improvements in the architecture of our private and public buildings; in the former, a better adaptation of the arrangements to the comforts and conveniences of life; in the latter, more suitable forms and arrangements for the purposes of business."

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"A collection of models and paintings at Washington could not fail to be highly useful. It would aid the cultivation of the art of design, which cannot be too strongly recommended. It multiplies the resources and enjoyments of the professional man, and is an essential accomplishment to the architect, the machinist, the artizan, and the mechanic. It ought to be taught in our common schools; and every mechanic should be able to sketch with accuracy his own plans, and to copy those of others, so as to be able to profit by every improvement that comes under his observation."

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"There can be no doubt that a National Institution, such as we contemplate, having at its command an Observatory, a Museum containing collections of all the productions of nature, a Botanic and Zoological Garden, and the necessary apparatus for illustrating every branch of Physical Science, would attract together men of learning and students from every part of our country, would open new avenues of intelligence throughout the whole of its vast extent, and would contribute largely to disseminate among the people the truths of nature and the light of science.

"A fortunate concurrence of circumstances offers a favorable occasion to carry all these important objects into immediate effect. A liberal and enlightened Englishman, foreseeing the benefits which would result to science throughout the world, by its successful cultivation in the vast and extensive field offered by these States and Territories, with enlarged views and praiseworthy philanthropy, has bequeathed a fund to be employed for the sacred purposes of increasing and diffusing knowledge among men. This bequest will enable the Government to afford all necessary protection to the promotion of science and the useful arts, without the exercise of any doubtful power, by the application of the annual interest of this fund to the establishment of an Observatory, the erection of suitable buildings to contain the collections, and for lecture rooms, the purchase of books and instruments, and the salaries of professors and curators. Specimens of natural history are rapidly accumulating. The exploring expedition has already sent home a large collection, which remains packed away in boxes in a room belonging to the Philadelphia museum, generously loaned by the company for that purpose; and we may anticipate, from the ability and well known zeal of the Naturalists who accompanied it by order of the Government, that the squadron itself, shortly expected, will return richly freighted with objects of Natural History. I cannot believe that after all the labor, pains, and expense incurred in procuring them, these specimens are not to be brought to Washington to be arranged and exhibited here. A Geological survey of the Territory of Iowa was made a few months since, by order of the Government, and numerous valuable specimens collected by Mr. Owen. Mr. Nicolet has brought with him interesting collections made in the country he visited, and Doctor King, of Missouri, lately sent to the Lead Region on business connected with the Ordnance office, while there collected specimens of Minerals which are likewise destined for Washington. The Ordnance Officers who have lately returned from Europe, have brought with them numerous specimens of the Iron ores used in the foundaries there, and measures have been taken to procure, as objects of comparison, those of the United States.

"Several individuals have transmitted donations to the Institution, while others have deposited their collections with us, from a desire to have them preserved, and at the same time to benefit science. We have reason to believe that this will be extensively done as soon as the Institution is firmly established. There are many of our countrymen who, like Sir Hans Sloan, the founder of the British museum, look forward with regret to the sale and dispersion of their collections, made at great cost and pains, and desiring to have them preserved entire, would deposit them with an institution which will be as stable as the Government that protects it.

For these purposes, and especially if it be intrusted, as we hope it will be, with the specimens of Natural History collected by the Exploring Squadron, it will be necessary that measures should be early adopted to have erected on a suitable site, on the public ground, a plain fire proof building, to contain them, where the increasing and valuable collections may be displayed, and be examined by the scientific inquirer, and where he may resort for evidence to support his theories or to correct his views. We hope that this further contribution to science will not be withheld. The expeditions themselves have received the favorable notice of every civilized nation, and were fitted out in obedience to the will of the people, who would not desire to see the fruits of so much toil and danger perish for the want of this trifling additional expense. We cherish the hope that they will form the foundation of a National Museum, and contribute to spread the light of science over our land."

Dr. Thomas P. Jones from the committee appointed to consider and report upon the expediency of publishing the proceedings of the Institution, reported favorably.

And it was resolved, that the proceedings be published in pamphlet form, at least once in every three months.

The Department of Astronomy, Geography, and Natural Philosophy, reported their organization:

F. R. Hassler, Chairman.
Robt. Greenhow, Vice Chairman.
C. M. Keller, Secretary.

The annual election, deferred at the last meeting, was then held, and the following officers were re-elected:

Hon. J. Q. Adams.
Col. J. J. Abert.
Col. J. G. Totten.
A. O. Dayton, Esq.
Dr. A. McWilliams.
} Council.

W. I. Stone, Treasurer.
Francis Markoe, jr. Corresponding Secretary.
Pishey Thompson, Recording Secretary.

Special Meeting, January 22, 1841.

Forty-three members present.

Hon. Joel R. Poinsett in the Chair.

The meeting was called for the purpose of considering amendments of the constitution; which, after discussion and

modification, were adopted, and a committee appointed to wait upon the Directors, and ask their sanction and consent.

The following donations were received :

History of the Art of Typography from its origin to its present improved state, by Dr. Karl Falkenstein, Leipzic, 1840.—*From T. G. Flugel, U. S. consul at Leipzic.*

Description of the Guttenberg Festivity, as celebrated at Leipzic.—*From the same.*

Head of a Mexican idol. Heylin's Cosmography, folio, London, 1703. Beurard's Dictionary, German and French, of German terms of Mineralogy and Metallurgy.—*From Robt. Greenhow.*

Copper coins.—*From James Gaither.*

Two earthen vessels, called juacuas, from Peru.—*From W. P. Zantzinger, United States Navy.*

An article on Electricity in steam, by Dr. Locke.—*From the Author.*

A table of Meteorological Observations, by Dr. B. B. Brown, of St. Louis.—*From the Author.*

Catalogue of the plants of Milwaukie, Wiskonsin, by J. A. Lapham.—*From the Author.*

Reply to imputations against the United States, contained in recent foreign journals, by Eugene A. Vail, (French,) Paris, 1837. Account of the Indians of North America, by Eugene A. Vail, Paris, 1840, (French.)—*From the Author.*

Inquiry into the received opinions of Philosophers and Historians on the natural progress of the Human race, by Joel R. Poinsett, Charleston, 1834. Eulogium on the life and character of Thomas S. Grimke, by James H. Smith, Charleston, 1835. Address to the Literary and Philosophical Society of South Carolina, delivered in Charleston, 10th August, 1814, by Stephen Elliott, 4to, Charleston, 1814.—*From Jos. Johnson, M. D., Charleston.*

Oration before the American Institute by Professor C. Mason, 2d edition, New York, 1840.—*From the Author.*

Dissertation on the nature and character of the Chinese system of writing, in a letter to John Vaughan, Esq., together with

a Cochin-Chinese vocabulary, and a Cochin-Chinese and and Latin dictionary, by P. S. Duponceau, 8vo. Philadelphia, 1838.—*From the Author.*

Recent shells, East Indies, (Modiola, Mytilus, Arca, Pinna, and Pecten.)—*From Francis Markoe, jr.*

Head of Dr. Franklin, (framed,) executed according to the Galvanic process of Jacobi, by Franklin Peale, Philadelphia.—*From Franklin Peale.*

Copy of a sketch from actual survey of several ancient fortifications, situated on the Little Miami river, Green county, Ohio; by J. G. Bruff.—*From J. G. Bruff.*

Atlas containing 52 plates on the public works of Russia, with a general map of the Empire.—*From Major William Turnbull, U. S. Top. Engineers.*

Engraving of the Academy of Sciences, and the fine arts, with the original sketch of the artist.—*From the same.*

A medal.—*From Mrs. Ramsay.*

The following letters were read:—

Letters of thanks to individuals, &c., who had made contributions to the Cabinet and Library of the National Institution.

A letter from W.W. Mather, one of the Geologists employed in the New York survey, from which the following are extracts.

"I have long felt the *importance* of such an institution, and rejoice that it is finally established. If the members be active, and really interested in the advancement of science, (and I trust and believe that they will be,) the Institution will be the means of great and enduring benefit to our country; and I trust that Congress will afford such pecuniary aid, as shall at once enable it to go forward and secure those benefits to the community, of which it is capable."

"I purpose sending specimens of minerals, rocks, fossils, books, &c."

Also, a letter from W. P. Rowles, of Gallatin, Tennessee, of which the following is an extract.

"Having read the various notices of your valuable Institution, I find that American antiquities and natural science are prominent objects. Having been much among Indians, I have wished to place my collection of observations, traditions, vocabularies, &c. &c. &c., in some proper depository; and if your society contemplate the publication of documents, I would submit what I have to their disposal, &c. &c."

And the following communication from Capt. George W. Hughes, of the Topographical Engineers, a member of the Institution:

To Francis Markoe, Jr., Esq.,
Corresponding Secretary of the National Institution, Washington.

London, November 26, 1840.

Dear Sir: When I last wrote from Glasgow, I promised at a future period to give some account of the proceedings of the British Association for the Advancement of Science; but circumstances force me to limit my plan, and this letter will, therefore, be confined mainly to the proceedings of the Geological and Mechanical sections at times when I was present.

I left London on the 16th ultimo for Glasgow, in Scotland, where the Association held its meeting for 1840, and arrived at the place of my destination on the 18th. The letters of which I was the bearer enabled me without delay to procure a free ticket, which constituted me a member for the session.

Among the number of distinguished persons convened on the occasion, to whom I was presented, was Professor Phillips, who very politely remarked that he could not accompany the geological excursion to Arran on the morrow, which had been projected, and as there was but a limited number of tickets given, he would transfer his own to me. I was sorry for the cause, but greatly obliged by his kindness, as it was an expedition I was extremely anxious to join. We rose early, breakfasted at Ardrossan, and embarked, about seventy in number, in the steamer "Isle of Arran," for the Isle of Arran.

Mr. Murchison, who had previously visited Arran in company with Professor Sedgwick, and reported on its geology, headed the section; and as we neared the shore, commenced his lecture, from the steamboat, on its geological structure. Among his auditors were Messrs. Griffith, of Ireland, De La Beche, Buckland, Jacobi, of St. Petersburg, Link, the great botanist from Berlin, and many others of reputation. Owing to the precipitous nature of the shores and the perfect calmness of the weather, our steamer, of light draught, was enabled to coast along very near to the Island, thus favoring us with an opportunity of most clearly recognising the superposition of the rocks and their various stratification. We approached Arran near where the whole coal field is seen in epitome, enclosed between the old conglomerate red sandstone and the new. The old red sandstone, he says, ought to contain fossil fish, (and he thinks they will be found, but as yet none have been discovered,) as this rock is known almost universally to abound with them; and he had found the same characteristic fossil throughout Russia, it being of a species called by him *Holoptychus Nobilissimus*, in honor of his friend, the Rev. Mr. Noble. The new red sandstone contains producti and other fossil remains of a kindred character. The series here dip north, descending, and are overlaid by carbonate of lime. Within sight of Sannox, to the north, is a remarkable hill rising to the height of 800 or 900 feet, called *Craig-a-Cuajou*, or the great écroulement of red conglomerate, large masses of which are found

resting along the foot of this crag. From hence the same beds are continued to North Sannox, where the cliffs disappear. At this point the anticlinal line is very obvious, and all the strata, as far as Clackland point, dip to the south, in an ascending order. Here also the primary schist thins out to such a degree as almost to disappear, and the conglomerate occupies nearly the whole basin far back into Glen Sannox, and may be traced even to the granitic ridge. Some of the lowest beds of the conglomerate, in this region, assume very much the appearance of grauwacke slate, and are traversed by dykes of greenstone. At Mid Sannox the cliffs present a mural escarpment, the lines of which are nearly horizontal; but at South Sannox they dip most decidedly to the south. Near the village of Corry the conglomerate is surmounted by a white and spotted sandstone, and the conglomerate here finally disappears. Mr. Murchison, speaking of this rather singular formation, says: "On a great scale it is to be viewed as a red conglomerate with many subordinate beds of sandstone, which cannot, either from the nature of the pebbles or the cementing principle, be distinguished from the newer conglomerate; neither can the sandstone of the one series be described as differing from the other. The existence, however, in the one deposite of beds of arenaceous grauwacke slate near the bottom, and that of the cornstone in the upper part of the formation, strongly identify it with the old red sandstone. Moreover, independently of any such distinctive character, the intervention of the well-developed group of the carboniferous series enables us with certainty to separate the two great deposites of conglomerates from each other, and to arrange them with the analogous members of English geology. In one respect, however, these deposites differ materially from those of the same age in England, since there appear to have been no disturbing forces to interrupt the continuity and conformity of the beds from the base of the older conglomerates, through the carboniferous series up to the highest beds of the new red conglomerate—these several formations being not only parallel to, but actually graduating into each other."

At Corry there are quarries of freestone—a kind of grit, from which good flagging-stones have been taken: but they are now nearly exhausted. The term "Corry" is Gælic, and signifies a deep bowl or depression in the mountains. The limestone which underlies the freestone is compact, of a bluish color, and abounds with fossils, among which are the large *producta Scotica*, the *spirifer striatus*, *cardium alæforme*, and the *madreporites* usually found in mountain limestone.

The coast is covered with immense boulders of granite, which must have been transported by some tremendous moving power from the mountains in the interior. The granite here, where found *in situ*, is evidently intrusive, and is surrounded, or rather encased, by the slates, whose strata have been obviously disturbed by the protrusion through them of the granite.

The granitic mountains, rising in high and jagged peaks, present a most bold and beautiful outline. Goatsfeld, above Brodich Castle, is the highest on the island, and the most striking in appearance. It is composed of a coarse-grained and old granite. As we approach Brodich, after passing the lofty summits of Goatsfeld, we coast along "the great upcast of the coal measures," where the

stratification may be studied to much advantage, as the whole measure is exhibited on the face of the mural escarpment, as it were, in miniature—none of the usual series being wanting.

Across Brodich Bay the mountains exhibit a very different but less imposing aspect; and, instead of the serrated outlines we have just observed, they are seen rising in *steps* or *stairs*, and convey the best possible idea of the trap formations. They are composed mainly of phorphyry and greenstone. A fine-grained granite is also found here, and was first discovered by Mr. Ramsey, in 1837, and is believed to be the *very newest* of the kind yet known. The reasons assigned by Mr. Ramsey for believing it to be the newest are, that no fragments of it are found in the neighboring rocks. It often sends veins into the slate, but, when raised to its present elevation, it could not have been in a state of fusion, from its being never found overlying the slate, which has evidently been fissured and partly elevated before the deposition of the old red sandstone. It is also found penetrating the coarse granite, which is also traversed by dykes of porphyry and greenstone, while the fine granite is never thus penetrated; and indeed there is reason to believe that it is newer even than the traps with which it is found, and it also sends veins into the new red sandstone, which conclusively establishes its *recent* origin. The slates in its vicinity exhibit evidences of the action of fire, having been partially fused and the strata greatly disturbed. Sometimes they assume a granular appearance similar to the true igneous intrusive rocks.

Sailing south of Brodich Bay, some very beautiful and well defined dykes of greenstone are seen, and also a remarkable pitchstone stratum, about 14 feet thick, which has been intruded *horizontally* between the old and the new sandstone.

The great importance of *fossil remains*, especially of *fossil ichthyology*, to identify formations locally remote from each other, was frequently insisted on by Mr. Murchison in the course of the day, and it seems to be a favorite proposition of his, to which I shall have occasion to refer hereafter.

The scenery in the vicinity of Brodich Bay and "Holy Island" (which is formed of trap resting on new red sandstone) is said to be not inferior to any other views in the highlands of Scotland, and repeatedly during the excursion called forth spontaneous exclamations of admiration from the party, as some new beauty in glen or mountain was discovered.

At three o'clock we landed at Brodich Castle, under salutes of cannon from the shore and from the steamboats at anchor. At the wharf we were joined by Monsieur Agassiz, who had reached the island by some other conveyance. On landing, we were received by the Marquis of Douglass, as the representative of his father, the Duke of Hamilton, and were then marched up to the Castle, with the hereditary piper in full costume at our head, playing the Gathering of his Clan. At the Castle we sat down to a sumptuous entertainment, prepared by the Marquis for the refreshment of the company. During the repast many toasts were drunk, and several good speeches delivered. Among the best speakers was Dr. Buckland, who is a *great gun*, being *Canon* of Christ Church, Oxford.

We left Brodich at six o'clock, on our return to Glasgow—every one apparent-

ly having been highly delighted with the excursion. During the passage back, Professor Johnston lectured on the influence of caloric in producing the changes the evidences of which we had this day witnessed. A great degree of heat applied to granite transforms it into pitchstone, the constituents of which are nearly or quite identical—the difference between the two substances being mainly in mechanical aggregation. Pitchstone is readily fused into glass, and was formerly used in France for that purpose. It had been objected to the igneous theory that, if heat were the principal agent of the changes which the surface of the earth has undergone, carbonate of lime could not have been found in the trap formations, as heat would drive off the carbonic acid, and decompose it. Yet it is seen to occur in these very formations. [I have found it, myself, among the traps and whynstone dykes at the Giant's Causeway.] But it is well known that, if pressure be applied, this result will not be produced. As, for instance: Take powdered chalk; put it into a gun-barrel; seal it hermetically, and apply an intense degree of heat. Instead of being decomposed, it will be changed into crystallised carbonite of lime. And, in conclusion, he stated in general terms that in fact there is no geological phenomenon which may not receive a satisfactory explanation from the well-known action of heat.

The isle of Arran has long been a favorite resort of naturalists, and has been called by one of them "a perfect jewel." It was here Hutton obtained the first crude notions of his igneous theory, now so almost universally received; and here he reduced them to form, and gathered arguments to sustain that system. The small circuit of the island—its strongly-marked anticlinal line—its well-defined stratification—its embracing nearly all the recognised series of rocks in the regular order of their superposition, and the presence of numerous forms of *characteristic fossils*, have all combined to invest it with peculiar interest for the student of Nature, and more especially for the lover of geological investigations. Messrs. Sedgewick and Murchison, after a careful examination of the island—having been governed by the well-known order of superposition—the mineralogical nature of the rocks, and the characteristic fossils—arrived at certain conclusions, which they have most ably summed up, but which, in the short limits of a letter, I can only succinctly notice. They refer the *lower conglomerates* to the *old red sandstone*, because they are subordinate to beds representing the carboniferous order—because they contain beds possessing the characteristics of grauwacke, and because they have inferior beds of concretionary limestone, similar to the *cornstone* (cornitiferous limestone, as Professor Eaton would call it) of Herfordshire and South Wales.

The central group they refer to the carboniferous series, because it contains beds similar to the mountain limestone, having the same suite of fossils, and because these beds are overlaid by a carboniferous deposite embracing three or four of the most characteristic fossils of the *true coal* measures. The minerals and the greater part of the fossils of the upper red limestone would tend to bring them, also, within the carboniferous order; and it is well known they elsewhere alternate with the coal measures; and, if I mistake not, such is the case with the Cumberland (Maryland) coal fields. They admit, however, that many of the fossils belong to the magnesian limestones overlying the coal measures of Durham.

And, lastly, they refer the upper red sandstone and conglomerate to the new red sandstone, which arrangement they believe to be confirmed by the formations on the nearest main land of Scotland.

They admit, however, that there are some points of disagreement between these strata and their supposed equivalents in many parts of Great Britain, and point out in what particulars the dissimilarity consists; and, in connexion with this subject, remark: "If, therefore, the rocks of the Arran section were assumed as the 'general type of all contemporaneous deposites, there would then be no serious 'objection to a classification attempted by some Continental and British geologists, 'wherein all the rocks of the orders above described are considered as belonging to 'one great formation of red sandstone, of which the carboniferous series only forms 'a subordinate part; for, as we extend our generalizations, we must necessarily 'diminish the number of our geological groups. We, therefore, think that this 'classification may have its advantage in comparing the contemporaneous deposites of remote regions. It is certainly inapplicable to the English secondary 'rocks, because the newer red sandstone is there always unconformable to the carboniferous, and, therefore, finds its true place in the superior order. This demonstrates that the carboniferous order of England was dislocated before the existence of the next superior order; but all dislocations are probably, in a certain 'sense, local phenomena; and, on that account, we do not think that a *want of* '*conformity* is one of the elements that will much assist us in grouping together, 'or in separating, contemporaneous deposites in distant parts of the earth."

They believe even the oldest of the granite to be newer than the new red sandstone, and that the trap in the southern part of the island is also newer; as it not only traverses the sandstone in many places, but has overflowed it and formed mountain masses of overlying rock. It must, therefore, have been in a much more fluid state than the granite at the time of the eruption. As it regards the age of the trap, it is difficult to conjecture, and it is not improbable that there may have been several periods of eruption, as the most of the Hebridean trap is newer than the oolitic series, and in Ireland it is posterior even to the chalk.

In reference to the granite mountains, they hazard the conjecture that the traps had their origin below them; and if these eruptive forces were not able to break through the thick covering of granite and primary schist, they may have acted on them in the mass, have partially penetrated them, and been the very agents by which they were elevated to their present altitudes.

Monday, 21*st*.—The first paper read this day in the Geological Section (Mr. Lyell in the chair) was "on the stratified deposites which constitute the Northern and Central Regions of Russia," by Mr. Murchison, who, in company with M. E. de Verneuil, Membre de Societé Geologique de France, had recently visited Russia for the purpose of determining the relations of the older stratified deposites in that empire; and he took this early opportunity, in anticipation of a more detailed memoir, to lay the result of their investigation before the public. His lecture being a mere sketch, my notes of it must necessarily be still more imperfect; and I shall endeavor only to convey briefly some faint idea of this truly interesting

and highly important paper. He began by saying that Russia differed from other portions of Europe by its older sedimentary rocks being more continuous, and less broken up by the disruptions which have rendered examinations so difficult in other regions by the interruptions and even *reversals* of the series in limited areas. In Russia, these strata are spread in unbroken sheets, trending for 1,000 miles in one direction, with but few changes in its organic remains or mineral constituents. The only difficulties presented were in the slight elevation of their beds above the level of the sea, thus exhibiting but few, if any, *mural escarpments;* and the great thickness of the superficial detritus resting on the fundamental rocks. They were thus compelled to traverse great extents of country, *along the river courses,* where the only appearances of denudation could be expected. They accordingly extended their researches from the longitude of St. Petersburgh to Archangel, ascended the Great Dwina to Ousting Veliki; thence to the south of Novogorod, and, finally, to the borders of Tambof, to determine the relations of the secondary rocks to those older deposites with which they had long been familiar.

The formations succeed each other in the following ascending order:

Silurian Rocks.—The oldest stratified deposites of Russia (those on which St. Petersburgh rests) are the clays, sandstones, limestones, &c., which, from their organic remains, are clearly the equivalents of the British Silurian system. The detailed order of these beds had been formerly observed, but, from a want of competent knowledge of fossilology, their proper place in the Geological series, and their relations to the superior orders, had not been defined. These Silurian rocks occupy several islands of the Baltic and the shores of Courland, and stretch in a broad band from west-northwest to east-northeast till they are lost under vast heaps of granitic detritus, between Lakes Ladoga and Onega; from these they are deflected north till met by great ridges of Trappean rocks.

Old Red Sandstone, or Devonian Sandstone.—They experienced no difficulty in identifying this system with an immense formation extending to the borders of Poland, and ranging over almost the whole of Lithuania. It stretches over a vast region to the Northwest, and constitutes much of the shores of the White Sea. This great system, consisting of clays, marls, cornstone, and flags, bears a strong resemblance to the deposites of the same age in the British Isles; differing from them, however, in abounding with saline springs and gypsum. This fact had induced previous writers to rank this formation with the *new red sandstone*, which, from its containing those minerals *exclusively*, had been termed in other parts of Europe the *saliferous system*. Its identity, however, with the *old red sandstone* is sufficiently established, it is thought, not only by its order of superposition, but also by its fossils, especially by its *fossil fishes*, among which are found the *holoptychus nobilisimus*, (already mentioned,) as occurring in rocks of the same age in Scotland. These fishes have been traced several hundred miles, occupying several stages in the system. These views were confirmed before the Section by Professor Agassiz. It is also proper to remark that other fossils, *never found in the carboniferous series*, were here discovered in profusion—such, for instance, as occur in Devonshire, Belgium, &c.

The Carboniferous series is found in the northern and central portions of Russia, but only the lower or calcareous beds occur, with sandstone, bituminous shale, and thin beds of impure pyritous coal, with the usual vegetable remains of coal measures. These are overlaid by a limestone somewhat similar to the British magnesian limestone, and sometimes resembling pisolite, while another is white and not much more compact than the *calcaire grossier* of Paris.

This white producta limestone stretches to the distance of a thousand miles. It has been called by some chalk, to which it bears a resemblance in containing nodules of flint, (chert?) sometimes coated with corals. With this are associated immense beds of gypseous alabaster; and thin bands of limestone alternate with it, which has been determined to be, from its fossils, the *true mountain limestone* of the coal measures. No workable beds of coal can be expected to be discovered south of Moscow.

Oolitic series.—It had long been a matter of doubt whether a series of strata could be found to connect the lower carboniferous beds with certain rocks of the oolitic series which were known to exist in the south of Russia. Some of those beds which rest on the great red formation along the banks of the Volga unquestionably belong to the middle oolite, as they contain the ammonites and belemnites identical with those belonging to that order. Some of the shells, however, resemble the lias; and on this point Mr. Murchison reserves his opinion till comparisons can be made of the fossils. The shales of the oolite rest directly on the white carboniferous limestone of Moscow.

Ferruginous sands cover the lias. In these are found large concretions of grit used for mill-stones, but no fossils as yet have been discovered in them.

Chalk.—The cretaceous system is very extensive, but was not on this occasion particularly examined.

Tertiary deposites.—Such deposites have not been discovered in the northern or central regions of Russia.

Younger Pliocene, (Pleistocene.)—Before the visit of these gentlemen, it was supposed that all the great masses of superficial detritus were referable to the diluvium epoch, in which the remains of the great extinct quadrupeds were also imbedded. They had not the leisure, however, to make a thorough examination of this interesting subject, but they were satisfied that it was divisible into several ages. They discovered as many as fifteen or sixteen varieties of shells of modern species. Mr. Lyell confirms this, and identifies them with the Udda-valla group. This demonstrates that, at a modern period, the whole of the vast flat country of Russia was under water, and the eastern shores of the sea extended to the foot of the Ural Mountains.

Drift and Erratic Blocks.—All the older formations are covered with detritus, the large granitic boulders of which, with the pliocine which they had discovered, were all derived from the north. This subject they intend to make the matter of a separate work.

Mr. Lyell spoke of the great importance of these discoveries in removing doubts as to the new arrangements of the British rocks, especially in reference to the iden-

tity of the age of the beds containing fishes in Herfordshire and the north of Scotland, and the limestones containing corals and other remains in Devonshire. But these questions had been settled by the discoveries in Russia. New formations in the various seas are in the constant progress of creation, and these must contain distinct organic remains, according to the localities; and thus the old theory of universal formations is exploded. From the almost perfect horizontality of the Russian strata, it is evident that they now exist as when they were first deposited, undisturbed by the igneous rocks; exhibiting evidences of a general rising of the land—or, if not a general rising, it could be proved that there had been an oscillation, as in some places there had been depression. He then referred to his own similar discoveries in Scandinavia; also to his discovery of Arctic sea shells at Udda valla, two hundred feet above the level of the sea; and, in Sweden, at six hundred feet. This theory of continuous formations, you are aware, originated with Mr. Lyell.

I understood Mr. De la Beche not to agree entirely with the views of these gentlemen, and especially to dissent from Mr. Murchison's proposition in reference to *characteristic fossils*. He regarded them as *good evidence*, but inferior to the proof of *superposition*, by which latter evidence he would be guided generally when the two conflicted; but he believed that fossil fish were the best fossil characteristics.

It does not, however, enter into the plan of this letter to analyze the different lectures which were delivered, or the discussions on them, which almost invariably ensued. I have attempted it only in this case because the subject was regarded as peculiarly important. If I had the leisure, I might endeavor to present a condensed view of some of the most interesting of the papers; but this is not very necessary, as, in the course of the winter, the volume of Transactions at the recent session will be published, and I will take measures to procure a copy for the National Institution. I would particularly recommend to your notice Agassiz on the Glaciers, Williams on the Combustion of Coal and the Prevention of the Generation of Smoke in Furnaces, Sir David Brewster's Papers, Dr. Chalmers on Statistics, and Espy's on the Law of Storms; which last paper attracted much attention, and was ably sustained by Professor Phillips.*

The following programme will convey some idea of the distribution of time and the organization of the Association:

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

Meetings, Excursions, &c., in September.

Wednesday, 16th,	1 p. m.	General Committee, (Faculty Hall College.)
Thursday, 17th,	10 a. m.	Committees of Sections.
	11 a. m.	Sectional Meetings.
	8 p. m.	General Meeting, (Theatre.)
Friday, 18th,	10 a. m.	Committees of Sections.
	11 a. m.	Sectional Meetings.
	8 p. m.	Promenade, (Exchange.)

* The Athenæum [illegible] and where my notes were defective I have supplied the deficiency from that source in my notice of Murchison's paper on Russia.

Saturday, 19th,	7½ a. m.	Arran Excursion.
	10 a. m.	Committees of Sections.
	11 a. m.	Sectional Meetings.
	2 p. m.	Botanic Garden.
Monday, 21st,	10 a. m.	Committees of Sections.
	11 a. m.	Sectional Meetings.
	8 p. m.	Promenade in Exchange.
Tuesday, 22d,	10 a. m.	Committees of Sections.
	11 a. m.	Sectional Meetings.
	5½ p. m.	DINNER in Theatre.
Wednesday, 23d,	10 a. m.	Committees of Sections.
	1 p. m.	General Committee.
	3 p. m.	Concluding General Meeting.

Breakfast, daily, from 8 to 10 a. m.
Ordinary, do. except Tuesday, 5 p. m. } Trades' Hall, Glassford street.

Model Rooms open daily from 8 a. m. to 10 p. m., Buchanan street and Argyll Arcade.

The first idea of holding these scientific meetings originated with the Germans, but the British Association differs from those of the Continent, in its relations to the Government—in appropriating money for scientific purposes, and in receiving representatives from all parts of the Empire. In some respects it is quite Republican; and any person who has read two papers before any recognised scientific society may, on purchasing a ticket, become a member of the General or Governing Committee, and have a voice in all its proceedings. The property of the Association is vested in three permanent trustees; and the annual elective officers are, a President, a General Secretary, a General Treasurer, a Local Secretary, a Local Treasurer, Presidents, Vice Presidents, and Secretaries of Sections, and a Chairman of the Committee of Recommendations. The Marquis of Breadalbane was the President for 1840, the Marquis of Northampton, President of the Royal Society, Chairman of the Committee of Recommendations, and the Duke of Argyle, Vice President of the Mechanical Section. I had the pleasure of listening to a paper read by this latter nobleman before the Geological Section, on the existence of copper-mines in Scotland. It was an interesting spectacle to behold one of the highest noblemen in the realm lecturing in a crowded room before a scientific meeting, and even filling a subordinate post in the Mechanical Section. What impressed on me more deeply than any thing else the importance of these meetings, was the severe and rigorous scrutiny to which all were subjected who appeared before the Sections. There seemed to be no respect paid to rank, nor to the high reputation of the lecturer, in the department with which his discourse was connected. Agassiz, Buckland, Lyell, Sir John Robinson, Sir David Brewster, De la Beche, &c., were all sure to be submitted to the same searching operation. The discussions which ensued were always interesting, and calculated to elicit truth, and were characterized throughout by great candor and courtesy of manner; but the man who ventures to address these meetings must take care to

make himself master of his subject, else he is certain to find that he occupies no very enviable position.

These associations enable scientific men to approach the Government with confidence; and scarcely a meeting is held in which some project is not submitted to Ministers; and recommendations from such a source are always received with great respect and attention, and are generally adopted. Most of the recent scientific expeditions and experiments instituted by order of the Government may be traced to this origin.

Another advantage resulting from these meetings is the good feeling cultivated among philosophers by social intercourse. They are thus brought frequently together, and not only compare opinions, interchange views, and communicate discoveries and experiments, but the asperities which unhappily so often arise among eminent men, rivals in the same course of ambition, are softened down or entirely repressed. It is to these meetings, also, that practical men resort for the purpose of obtaining correct scientific information. And show-rooms are fitted up, in which are deposited ingenious machines, highly-finished fabrics, and models of new inventions in the arts and sciences.

I have been thus particular, under the belief that some useful hints may be communicated for the future guidance of our National Institution, for the honor and prosperity of which I feel the deepest interest.

At the last meeting it was suggested that a general congress of savans should be annually assembled from all parts of the civilized world, and that the illustrious Humboldt be requested to act as its first President. This grand idea was favorably received, but not definitively acted on, but will doubtless be carried into effect in a few years. If it should be, it is to be hoped that our country will not be backward in lending its aid to so noble a project, and may be fully and ably represented at its first meeting. I cannot refrain from indulging the hope that I may live to see such a congress hold its session in Washington, New York, or some one or other of our large and wealthy cities, where the requisite accommodations could be extended to such a body.

Very truly, yours,

GEORGE. W. HUGHES,

Capt. Top. Engs. and Member Nat. Inst.

Stated Meeting, February 8th, 1841.

Present, thirty-six members.

Hon. Joel R. Poinsett in the Chair.

The following donations were received:

An original bust of Hon. Joel R. Poinsett.—*From Ferdinand Pettrich, Sculptor.*

Iron ore, Warm Springs, Bath County, Virginia. Same, from the Island of Elba. Lava, from Vesuvius. Sulphur, from Vesuvius. Stalactite, from St. Michal's cave, Gibraltar. Lava, (polished,) from Ætna. Alabaster, from Ætna. Basalt and sulphur, from the Lipari Islands, Coast of Sicily. Stalactites, from the Grotto of Antiparos. Volcanic glass, Island of Milo. Marble, from the temple of Minerva, Cape Collonna. Stalactite, encrusting a specimen of the cement which coats the columns of the Roman reservoir at Baiæ near Naples. Marble from the temple of Jupiter Serapis, Puzzuoli, near Naples. Pottery of the ancient Greeks, Island of Milo. Cornelcans, from the upper Mississippi. Mosaic, from Pompeii. Human bones, from the Catacombs at Syracuse. Egyptian Idols, from tombs in the neighborhood of the Pyramids.—*From Lieut. J. S. Chauncey, U. S. Navy.*

Head of Charlemagne (antique.) Six antique masks, made of the lava of Vesuvius. Five Roman mosaics, being gradations of the art, beginning with an outline, and terminating with a very precious and perfect picture, with specimens of the material and tools. Lava from Vesuvius, with a copper coin imbedded when in a state of fusion in 1829. Box made of the lava of Vesuvius, embellished in relief. Stalactite from Tivoli. Dendritic marble from the river Arno. Quartz crystals from Lake George. Polished agates, Switzerland. Medal, struck at the centenary celebration of the city of New Haven, Connecticut. Seven silver coins. Russian coin of Platina. Five medals commemorative of the French revolution achieved in the three days of the 27th, 28th, and 29th of July, 1830. Copies of two medals moulded by a natural deposit of carbonate of lime near Radicofani. Vase from Pompeii. Lacrymatory from Pompeii. Iron ore from Lake Erie. Shells. Profile of Louis Philippe in Sevres china. Lion and horse in bronze, (antique.)—*From Mrs. Poinsett.*

Congressional documents.—*From H. C. Williams.*

Transactions of the American Academy, Boston, (presented at the instance of John Pickering, Esq., President.) By F. Alger, Jr.—*From the officers of the Academy.*

Lacrymatory, from Athens. Three gold coins. Fourteen silver coins. Eight paras. Thirty-one copper coins.—*From Mrs. Offley, Georgetown.*

Chama (large.) China seas.—*From the Hon. Levi Woodbury.*

Map of Asia, by D'Anville, 1751, in three parts. Post-map of Brunswick, by F. W. Ohsen, Hanover, 1774. Atlas of the Tyrol, by Professor Weinhart, Vienna, 1774. Map of Switzerland, by T. R. Meyer, 1786 to 1802. Military map of Mecklenburg by Strelitz, in nine sections, 1780. Topographical map of the country, between Dresden and Frizburg. Topographical map of the Duchy of Magdeburg, by Soltzman, 1800. Military map of the seat of war during the campaign that terminated the seven years' war. Map of west Galicia, by Reymann, 1797. Map of the province of Arlberg, by Pfarmdler, 1783. Map of Pomerania, by Soltzman, 1789. Map of East Freidland and the Duchy of Oldenburg, 1804. Trigonometrical survey of Galicia and Lodomeria, 1788. Map of Warsaw and East Prussia, Berlin, 1808. Map of Wurtzburg, by C. J. Freyherm Von Fackenhofen. Map of the Circles of the Rhine, Franckfurt sur Main. Military map of the campaign of the combined armies under Prince Henry of Prussia, in 1759. Topographical map of the Duchy of Berg, 1789,–'90. Military map of the seat of war in Germany, 1760, by Captain Carlet de la Rosiere, Franckfurt sur Main, 1761. Military map of the campaign of 1778. Compendium of ancient Geography, (Latin,) by Christopher Cellaius, Rome, 1774. Map of Italy, by Chauchard, (Paris,) in four parts. Map of France, by Belleyme, 1791. Map of South America, in seven parts. Military map of Saxony, by Petre. Atlas containing maps of Silesia, the principality of Neiss Grotkom and the Circle of Silesia, in Topographical maps. Sclavonia. Venetian Territory belonging to Austria, province of Venice, with the maritime countries of Istria and Dalmatia. (Austrian.) Carinthia and Carniola, Saltzburg and Passau. Ecclesiastical map of Austria, Tyrol, Galicia. General map of the Austrian monarchy, Bohemia and Moravia, general

map of Austria, part of Dalmatia with Albania, Styria, Croatia, Moravia, and Austrian Silesia, Austrian dominions below the Ems, Austrian dominions above the Ems. Northwest part of Dalmatia, Hungary, West Galicia, the Marches, Lower Hungary, Upper Hungary, Transylvania, Bohemia.—*Nuremberg* 1750. Atlas containing Topographical maps o Darmstadt, Zivingenberg, Oppenheim, Langen, Guntersblum, Konigstein, Deidenbergen, Manheim, Franckfurt, Worms, Heppinheim, Frankinthal, Seeleigenstadt, Babenhensen, Heidelberg, Aschafenburg. Map of Livonia of the circles of Riga, Revel, Port Baltic, Wenden, Walmar, Walck, Hapsal, Weissenstein, Werro, Dorpt, Tellen, Pernau, Arensburg or the Island of Oesel, Wesenburg. Maps of South or Upper Prussia, of Warsaw, Polen and Kalisch of Prussia, Northern or Lower.—*From the Hon. Joel R. Poinsett.*

Graphic sketches, illustrating the costumes, habits, and characters of the Aborigines of America, by N. Chapman, 1841. *From the Author.*

Medal struck to commemorate a reform of the constitution of Chili in 1833.—*From J. H. Causten, jr.*

Collection of geological facts and practical observations, intended to illustrate the formation of the Ashby coal-field, in the parish of Ashby de la Zouch, and the neighboring district, being the result of forty years' experience and research, illustrated by a map, sections, and upwards of 300 colored figures of fossil remains, by Edward Mammatt, F. G. S. 1836.—*From the Hon. Virgil Maxcy, Chargé d'Affaires of the United States to Belgium.*

Course of Legal Study, by David Hoffman, 2 vols., 8vo., 2d edition, Baltimore, 1836. Law Institutes, in a series of lectures, by David Hoffman, Baltimore, 1822. Introductory lecture, by the same, Baltimore, 1832. Miscellaneous Thoughts on Men, Manners, and Things, by Anthony Grumbler, 12mo., Baltimore, 1841. Viator, or a Peep into my Note-book, 12mo., Baltimore, 1841. Legal Outlines, by David Hoffman, 8vo., Baltimore, 1836.—*From the Author.*

Observations on the best means of propelling ships, by Alexander S. Byrne, of London, (dedicated to the National Institution, four copies.) A model of Erickson's propeller.—*From Mr. Byrne.*

Catalogue of works on American history.—*From D. B. Warden, Paris.*

A communication was received from B. S Roberts, Civil Engineer, "with several articles of edged instruments, said to be manufactured from the *steel ore* recently discovered in Franklin county, New York."

Specimens of natural history.—*From the Rev. Dr. Thornton.*

Specimens of crystallised oxide of tin, Jackson, New Hampshire, have been received.—*From C. T. Jackson, Surveyor of the State.*

Mr. Byrne's communication on the "best means of propelling ships," was referred to a committee.

The following letter was received from the Hon. Virgil Maxcy, Chargè d'Affaires of the United States to Belgium:

BRUSSELS, *December* 29, 1840.

To the Hon. J. R. POINSETT, *Secretary of War, and First Director of the National Institution for the Promotion of Science, established at Washington.*

SIR: I have given directions to the Agent of the Legations of the United States, London, to forward to you a Geological Map of England and Wales; and, knowing the deep interest you must necessarily feel in the success of the National Institution, which already owes so much to your zeal and public spirit, I take the liberty of requesting you to present the Map in my behalf to the Society, with assurances of my earnest desire to advance its interests, so far as my power may extend. The Map, I am informed, has been prepared with much care and fidelity from the most authentic sources of information, especially from facts collected by the great trigonometrical and geological survey now in progress, and rapidly approaching to completion under the orders of the British Government.

It affords me the highest gratification as an American citizen, and as the representative of our Republic to a foreign country, to learn that the National Institution, recently founded at Washington, has been so favorably received by our men of science; and I cannot but indulge a hope that the public generally will lend it a generous confidence and cordial co-operation, and thus supply what has long been to us, who occupy so high a rank in the scale of civilization, no little reproach; the want of some Society or Institution which may compare with those of other nations, and sustain the reputation of our Republic in the great cause of scientific investigation, in which no country can feel a deeper and more abiding

interest than our own, as every day evinces some new fact illustrative of the extraordinary skill, energy, and ingenuity of our citizens—qualities in which they are equalled by few, and surpassed by no other people. If such be the case in our not very advanced state of science, what important results might not be anticipated with more extensive practical experiments, greater knowledge of abstract science, and the collection and diffusion of minute economical information in connexion with the useful arts? But I feel that it is quite unnecessary to enlarge upon a subject on which so much might be said and written.

While indulging in these patriotic sentiments, which I believe are common to us all, it has occurred to me that perhaps no better disposition could be made of the munificent bequest to the United States, by an enlightened foreigner, for the establishment of an institution at Washington for the "diffusion of knowledge among men," than to place it under the direction of a Society which has been organized for the express purpose of carrying into effect similar, and indeed I may add, identical views with those contemplated by the philanthropical and philosophical testator. One among many reasons that might might be urged for this arrangement would be, the securing in its favor the general and perhaps universal influence of scientific men, whose patriotic labors would thus be brought into active co-operation with the Smithsonian Institution, whose funds would enable the Society to collect and diffuse throughout the United States a vast amount of diversified and valuable information.

With the best wishes for the success of the Institution, and assurances for yourself of high regard and consideration, I have the honor to be, sir, your obedient humble servant, V. MAXCY.

A copy of a circular was read, addressed to the principal scientific institutions of Europe, announcing officially the establishment of the National Institution, and requesting their correspondence.

In consequence of a resolution introduced by the honorable Governeur Kemble, that each member of Congress should be invited to bring specimens of the natural productions of his district on his return to Washington, the following circular letter was addressed to the members by the Directors:

WASHINGTON, *February* 9, 1841.

SIR: The National Institution for the Promotion of Science and the Useful Arts, established at the seat of Government, is desirous of procuring specimens of the natural productions of every portion of the United States, and for that purpose respectfully asks your aid and co-operation. The district you represent doubtless possesses many important minerals and vegetable productions, which might prove of great value to the arts if they were generally made known. Specimens of such productions being brought to Washington will not only advance the objects of the institution, but will prove advantageous to the country whence they come.

They will be described by the scientific members of the Institution, and their uses and advantages pointed out, and the specimens exhibited to the public in its museum.

You are respectfully requested to bring with you, on your return, such specimens as you may collect during the ensuing recess. Even a single specimen from each member will be of great advantage to the Institution, and be thankfully received as a tribute to science.

We have the honor to be, sir, your most obedient servants,

J. R. POINSETT,
J. K. PAULDING,
Directors.

To the Hon. ———.

A letter was read from Lieutenant W. D. Porter of the United States Navy, dated the 17th January, 1840, and was referred to the Directors, who were requested to carry into effect, if in their power, its suggestions.

Extract from Lieutenant Porter's letter.

"The Army and Navy could be made beneficial to the Institution. There are many in both branches who would, no doubt, employ their leisure in obtaining specimens and information, provided they were directed in the right way. A cabinet could be placed on board of all our sea-going ships under the charge of the commander, in which might be deposited specimens by all persons desirous of making donations, to be finally sent to Washington. By such an arrangement the society would receive duplicates which might be presented to the colleges and museums of the country. Cabinets at all the army and naval depots might in the same way be made highly useful. The donors and collectors would feel themselves amply rewarded by knowing they were aiding in the diffusion of useful knowledge in their country."

Information has been received that about 150 boxes, the results, as far as have been received, of the Exploring Squadron's exertions, containing a variety of interesting objects of Natural History, and destined for the cabinet of the Institution, have been shipped at Philadelphia, and are expected as soon as the navigation opens. In consequence of the statements contained in the following communication, the specimens will not be handled until all the necessary arrangements shall have been made:

"It would be undivisable to break open the cases containing the articles collected by the South Sea Exploring Expedition, until such period as they are intended to be prepared for exhibition. This refers to the zoological and ornithological department principally.

"The immense quantity of arsenic, and corrosive sublimate, necessary for their preservation requires imperatively that very great caution should be observed, and that the handling and arrangements should be under either the immediate inspection or personal attention of one fully adequate to all the details connected with this subject.

"In the hands of inexperienced persons death might be the result.

"W. McGUIGAN,
"*Curator, P. M. C.*

"PHILADELPHIA, *February* 6, 1841."

The following letter from Captain George W. Hughes, of the corps of Topographical Engineers, has been received:

BRUSSELS, *January*, 1841.

To FRANCIS MARKOE, Jr. Esq., *Corresponding Secretary of the National Institution for the Promotion of Science, Washington.*

SIR: Availing myself of a season of comparative leisure, I have transcribed, for the National Institution, that portion of my journal which relates to a tour through South Wales; which will be followed in a few days, by a copy of the notes taken in Devon and Cornwall, with some general remarks on the working of the tin and copper mines, and the preparation of the ores for market.

You will perceive that the journal is not in continuation of that previously transmitted, but, if I should find leisure before the season for travelling opens, I may attempt to supply the omission by papers on several subjects of scientific and practical interest.

I have the honor to be, sir, your obedient servant

GEORGE W. HUGHES.

December 3d, 1840.—Left London by the twelve o'clock train for Bristol on the "Great Western railway," intending to visit the mineral and manufacturing regions of Wales, Devon, and Cornwall. The great western is open from London to Worton Bassett, 60 miles, and also from Bath to Bristol, 12 miles—the intermediate distance being travelled in post coaches owned by the railway company. The *gage* or distance between the rails is 7 feet; the gage of the other railways being 4 feet 8½ inches. This is admitted to be one of the best constructed roads of the kind in the world, and nothing can be more smooth, easy, and rapid, than the transit of the carriages over it. As this railway is peculiar in many respects, I may make it the subject of a special communication at some future period. Mr. S. K. Brunell, the chief engineer, has laid a wager, I am informed, to run an engine over the entire line when finished (112 miles) in *two hours*, which it is believed he will accomplish, as engines have been run on the road at quite as high a velocity. Some time since a train conveyed Prince Albert from Windsor to the Paddington Terminus at so frightful a rate, that he was "graciously pleased," as the newspapers state, "to command that they should not in future carry him at a greater speed than 25 miles an hour." Much amusement was excited at the time by a remark of George the third, (*before railways were,*) that he was not fond of rapid travelling; 16 *miles the hour* was fast enough for him or any other *reasonable* person.

December 4th.—Bristol is a fine old town, of much capital and former trade, having been the second city in the kingdoms; a rank which it has long since forfeited owing to the want of enterprise in its inhabitants, who, to do them justice, however, are now straining every nerve to regain their former ascendency, as is evinced by the various important projects on which they are engaged, such as transatlantic steam-navigation—the Great Western railway—the Exeter railway and the magnificent suspension bridge over the Avon, one of the wonders of the world.

Remained here all day and dined in the country with Mr. Webb Hall, an eminent agriculturist and breeder of fine cattle; the vicinity of Bristol is *eminently beautiful* and in a high state of cultivation. The town is built on both sides the river Avon, and the basin is formed by two locks abreast, retaining the high-tides which rise about 12 feet.

December 5.—Left at 10 o'clock for Swansea in a steamer—a very calm and foggy day, so that we could see scarcely the length of the vessel ahead. The ride down the Avon is in fine weather very beautiful, but the navigation is difficult at all times, owing to the narrowness of the channel and to the numerous craft passing to and fro. Nothing but the minute and judicious regulations established for the guidance of vessels and the rigid enforcement of them, prevent the frequent occurrence of serious accidents. Just below the locks is the site of the chain suspension bridge (already mentioned) of a single span measuring nearly 700 feet, at an elevation high above the masts of the largest ships. The towers are finished and one chain stretched across, (on which persons are carried in a car,) and the whole is expected to be completed in the course of the year 1841. Mr. Brunell is the Engineer, and this work, like every thing he touches, bears the impress of his boldness in design and skill in execution.

We reached the mouth of the Swansea river (called "the Mumbles") about 9 o'clock at night, but it being low tide, could not ascend to the town till after midnight. The access to the harbor is still difficult, notwithstanding the large sums of money expended for the improvement of the navigation, and on the construction of artificial piers, which have, however, much ameliorated its condition. The spring tides rise here frequently fifty feet, and, at low tides, there is no water in the channel. At the principal obstruction there is a light-house, and one also at the Mumbles; and a large bell is rung when there is *just ten feet* water on the bar, whether at flood or ebb. The British Government is very liberal in making provision for the light-house establishment, and bestows much commendable attention upon this important subject, which might, with great propriety, be imitated elsewhere.

6th December.—Visited the extensive *copper works* of Williams, Forster, & Co. Young Mr. Williams, the son of the managing proprietor, showed me over the works, and communicated, without reserve, the most particular information in reference to the various processes by which the ores are reduced to a metallic state. The *domestic* ores are brought to Swansea pulverised, but the *foreign* ores frequently in their natural condition; the preparation at the mines of the ores for

working is a tedious and rather laborious process, but a description of the manner of doing it will properly come within my account of the Cornwall and Devonshire mines. It is a great economy to have the ores submitted to this preliminary operation before shipment, as it induces, among other advantages, a very considerable saving in freight; and is, in fact, absolutely essential to the successful working of the poorer ores.

The ore, having been pulverised, is carried by railway and steam power up to the Hoppers, from whence it is passed into the furnaces, (below the Hoppers,) and there subjected to a high degree of heat, for twelve hours, by which time it is well calcined. This drives off much of the arsenic and sulphur with which it is combined. It is then carried to another furnace, where it is melted. The slag is lighter, floats on top, and is the first drawn off. Fluxes are seldom necessary, and never so, except with a very refractory ore, when fluate of lime is used for that purpose. The first slag, which is usually remelted, generally acts as a sufficient flux of itself. It is often seen crystallized in various forms, exhibiting a beautiful pavonine play of colors. The crude copper is now broken up and remelted, with a current of air passing through it for the purpose of oxidising the iron with which it is mixed, and is then drawn off, into a tank of cold water, to granulate. The water is prevented from becoming hot by a cold stream continually running through the tank. The object of the granulation is to separate the metal into small globules, so that the fire may circulate freely through and amongst it, when again subjected to its purifying action. After granulation it is again roasted or calcined for thirty hours, and is then removed to another furnace, when it is melted, with a draft of air passing through it, as before, to effect a still further oxidation of the iron; from this furnace it is drawn off and run into pigs. It is then again broken up, remelted, and, in a fluid state, conducted into a refinery, among burning charcoal, from whence it is run into ingots, or into plates about 18 inches square by two or three inches thick. This is sometimes the copper of commerce; but it is usually rendered malleable and ductile by the following processes, viz: it is clipped, heated, and rolled, and cut into sheets, say two feet long; again heated and rolled; then again heated, *doubled*, and rolled, and sometimes (depending on its quality) again rolled, without additional heating.

This is called finishing: it is then immersed in a bath of uric acid for the purpose of brightening the metal, and removing the appearance of impurities from the surface. It is then put into a furnace; then immersed in cold water, from which it is brought out bright. It is then taken to a machine, where its four edges are clipped smooth, leaving it about three feet long and one wide, in thin sheets. It is then assorted, weighed, and stamped with the weight per square foot, which ranges from 10 to 20 ounces.

In some of the establishments, the processes are more simple; but I should doubt these being so efficient. As, for instance, the metal is granulated from the first melting, direct, and after the second melting it is not broken up, but remelted in mass; and, in rendering it malleable, it is not always submitted to so many heatings and rollings. At Mr. Williams's works, an engine of 96 horse powe

performs the necessary mechanical labor of the establishment. The smoke of all the furnaces is conducted by flues to a large brick arched trunk, or common recipient, which leads to a chimney about 70 feet high; this discharges the smoke and noxious vapours, and relieves the workmen from much of their baleful influence.

In the vicinity of the works, and, indeed, for miles round, there is scarcely the appearance of vegetation, and, in many places, not a trace of it can be seen. Every thing seems to droop and to die under the deleterious influence of the noxious gases emitted from the numerous furnaces: and where the surface of the ground was formerly covered with a rich sward, it is now furrowed by the action of the rains, and nothing can be made to grow on it. It is alike inimical to animal life. Horses and cattle are poisoned by it; their limbs become swollen; their eyesight defective; their teeth drop out; and they would soon die if they were not removed at the end of two years, when their places are supplied by other victims. It is not so fatal to human beings, as they only *breathe* the arsenic and sulphur, while the poor beasts *eat* those substances from the herbage, on which they are deposited; but that it is extremely prejudical to man there can be no doubt, although he is certainly less affected by it than one might suppose. I always felt extremely uncomfortable after my visit to the works, and imagined myself pretty well poisoned; and, indeed, how could it well be otherwise, when the presence of arsenic, to say nothing of sulphur, was so perfectly obvious from its alliaceous smell! All suffer from it perceptibly, except the operatives, who are so laboriously employed as to excite profuse perspiration, which relieves them, in a great measure, from its injurious action.

Swansea is the greatest manufactory of copper in the world; and here nineteen-twentieths of the copper of the kingdoms is made. All the ores here reduced are brought from a distance—some from Valparaiso, some from Cuba, a small quantity from New Orleans, and a large proportion from Cornwall and Devon, and some, but not a great deal, from Hollyhead, Anglesea, and from Ireland. It is now 250 years since the first ores were shipped from Cornwall to Wales. The Cuba and South American ores yield about 20 per cent., sometimes, but rarely, 25. The Irish 10 to 12, and the Cornish 7½ to 8½. I could learn but little about the ores from the United States, except that they were pretty good. Ores yielding 20 per cent. of copper are worth at the furnaces, *when prepared for smelting*, from £18 to £20 per ton, or betwen $90 and $100 per ton of 21cwt. The best metal is worth from £100 to £120 per ton, and the profits are said to be large.

The following table (extracted from the official report of Mr. De la Beche, director of the Ordnance Geological Survey) of the foreign and British ores, sold at Swansea, by ticket, in the manner practised in Cornwall, may be useful in showing the amount of foreign copper ore imported into South Wales during the year, (ending 30th June, 1838;) as also the produce of some of the copper mines in Ireland and Wales, for the same time:

	21 *cwt.*	*l.*	*s.*	*d.*	*l.*	*s.*	*d.*
Allikies - - - -	4,575	43,436	0	6	9	9	10
Ballymurtagh - - -	6,711	21,840	16	0	3	5	1
Ballygahan - - - -	634	2,322	10	6	3	13	3
Chili ores - - - -	5,619	115,915	1	6	20	12	7
Cobre mines - - -	5,644	114,406	15	6	20	5	4
Copiapo - - - -	1,047	19,475	9	0	18	13	4
Cuba - - - - -	1,133	20,604	11	0	18	3	8
Cronbane - - - -	2,056	7,499	19	0	3	12	11
Connoree - - - -	350	1,552	9	6	4	8	8
Crom - - - - -	23	194	7	0	8	9	0
Drwsycoed - - - -	400	2,332	17	0	5	16	7
Knockmahon - - -	6,345	53,561	10	0	8	8	9
Llandidno - - - -	811	6,909	17	6	8	10	4
Llanbenis - - - -	494	2,083	6	6	4	4	4
Llandegai - - - -	66	469	2	0	7	2	1
Laxey - - - -	137	513	9	0	3	15	0
Mexican - - - -	90	797	13	0	8	17	3
Norway ores - - -	1,591	18,303	7	6	11	10	0
Penralt - - - -	74	494	18	6	6	13	9
Symnia dylluan - - -	186	1,425	0	6	7	13	2
Sygun - - - - -	183	728	19	6	3	19	8
Sundries - - - -	362	1,780	1	0	4	18	4
Tygrony - - - -	2,034	9,354	18	6	4	12	0
Union - - - -	446	1,460	9	0	3	5	5
Valparaiso - - - -	1,920	33,859	14	0	17	12	8

Average standard, 97*l.* 17*s.* Average produce, 13¾. Average price per cwt. 11*l.* 4*s.* 6*d.* Fine copper, 5,906 tons 9cwt. 2qrs. 25lbs. Amount of money, 481,323*l.* 3*s.* Copper ore, 42,931,21cwt. The amount of copper ore thus sold in Cornwall and Swansea, for the year ending as above, would amount to 188,619 tons, (of 21cwt. each,) estimates to contain 17,433 tons of fine copper, and sold for 1,339,102*l.* 14*s.* From another source I have ascertained that the amount of copper ore smelted at Swansea, from 30th June, 1839, to 30th June, 1840, was 203,545 tons of 21cwt. Produce in fine copper, 19,511 tons 1cwt. 3qrs. 24lbs.—worth 1,466,770*l.* 7*s.* 6*d.*

Copper ore imported into the united kingdoms, for the year ending 5th January, 1840, 28,757 tons. Average value of Cornish ores, in the year ending 30th June, 1840, 5*l.* 7*s.* 6*d.*

Average value of Cuba ores, for the year ending June 30, 1840	-	£14	12*s.*	4*d.*
Do.	Cobre	do.	do.	-	16	10	2
Do.	Chili	do.	do.	-	19	4	0
Do.	Valparaiso	do.	do.	-	19	7	3

The foreign copper ores are merely introduced for the purpose of smelting, and the purchasers of such ores are bound to export as much copper as is estimated, from assays made previous to sale, to be contained in them; hence the quantity necessary to be exported depends on the accuracy of such assays.

The amount of metal procured from foreign ores is sometimes nearly, or quite one half the entire reduction, but for a few years past it has greatly diminished,

owing to some failure or difficulty in working the mines, or, perhaps, to the disturbed political condition of the South American States. In 1837 it was nearly one-third of the whole reduction. Copper pyrites, or the *bi sulphuret* of copper, is the chief ore of that metal which occurs in Devon and Cornwall; other copper ores being found in comparatively small quantities. The next in importance is *the sulphuret* or *grey* ore of the miners. The *black ore*, or oxide of copper, is sometimes found in sufficient quantities to be worked to advantage. The carbonates are rich but difficult to reduce, and are never used except when mixed with the other ores. The escape of carbonic acid gas carries with it much of the metallic base in a state of sublimation; but the nature of the different ores belongs properly to another division of the subject, and will be noticed hereafter.

It is thought that nearly all the metal from the ore is extracted, not losing more than a half per cent. beyond the assay; but it is not clear that they obtain all that chemical analysis would show. The assay is usually by the *dry mode* and analagous to the process of reduction on a large scale. Since writing the above I have seen Mr. De le Beche's valuable work on the economic geology of Devon and Cornwall, in which he remarks that "the mode of assaying copper ores is usually conducted in a somewhat rough manner, and accurate results can scarcely be expected from it. Indeed, chemistry has made but little progress among the assayers in Cornwall." He says that it is precisely the same with that described by Price sixty years ago. Berthier, (Traite des Essais par la Voie Seche tom. 2, p. 474,) describing assays of the sulphurets of copper mixed with iron, (such as the workable ores usually are,) and after noticing the roasting in which it is necessary to stir the particles of ore continually, so that all should come in contact with the air, says: "That when the roasting is somewhat advanced that the heat should, from time to time, be increased to a bright red, in order to make the sulphurets and sulphates act upon each other and produce reciprocal decomposion. When the sulphurous acid ceases to be disengaged, a white heat should, for some minutes, be produced to decompose the last trace of sulphate. When the roasting has been conducted with care, the assay, melted with 3 or 4 times its weight of black flux, will give nearly all the copper which it contains, and the iron will remain disseminated through the slag, partly in a metallic state and partly in a state of oxide. If the roasting has been imperfect the slag will be sulphurous and retain copper in combination. With poor copper ores the slag also retains a good deal of copper, but this loss may be greatly decreased by adding about one part of borax to the black flux, in order to render the scoria more liquid; but it is preferable, in such cases, to assay by the humid way," which indeed Berthier strongly recommends for ores of this class, when they are mixed with much iron.

Swansea contains about 20,000 inhabitants, nearly all of whom are connected with the various manufactories and mines in the vicinity. Besides the copper works there are iron works, a pottery, and bituminous coal pits near the town. About 500,000 tons of coal are shipped annually from this port, and a very large amount is consumed. The Welsh coals are less bituminous and agglutinating than

the English, and are therefore better adapted to the reduction of ores. They may, generally, be used for that purpose without coking, when free from sulphur.

The only anthracite coal in Wales (there is none in England of consequence—one mine at Bideford is worked to a limited extent) is found about sixteen miles from Swansea, on the canal. It is used for malting, for lime burning, and a small amount for reducing iron ores. But for fuel *never*. I have often been asked if we had any bituminous coal in America, as it is known we consume so much anthracite. About 350,000 tons of this species of coal are shipped annually, including culm, which is by far the greater quantity. The term culm is applied to the fine anthracite.

December 7th. This morning early entered the anthracite mines belonging to the British Iron Company; one of the most powerful mining associations in England. As the coal crops out in the "Crom Tawe" the mines are worked by drifts; but owing to the company's limited rights of soil in the valley, they were compelled to commence the drift about 80 feet below the out crop, and it is raised 800 yards before the coal bed is reached. It is there about four feet thick, but the dip soon strikes too deep to be worked with much advantage by means of this drift, which then ascends, by a steep inclined plane 60 feet to the thick, or 9 feet bed. There are several strata of iron ore, of the argillaceous species, or clay iron stone, alternating with the coal, varying from two to six inches in thickness and yielding, on an average, about 35 per cent. of metal. We entered about one and a half miles, but the whole extent of the galleries and chambers is much greater. A good deal of fire damp is found here, which I always supposed, till now, did not exist in anthracite mines. All the galleries are provided with doors, which are closed or opened as may be necessary, to give a proper direction to the current of air, which is forced in through a long trunk, something like an adit, by a contrivance similar in size and appearance to a "*wheat fan mill*," kept in constant motion night and day, by a large over-shot water wheel. There is always more or less of carburetted hydrogen or fire damp through the workings, and in the chambers where the ventilation is not perfect, as may be seen by the sparks emitted from your candle and the *yellow halo* that surrounds it. It is essential to your personal safety, if Davy's lamps are not borne by the guides, that the flame of the candles should be often examined, for if they burn *blue blazes* you are in imminent danger, and should immediately retreat, or throw yourself down flat on the floor. You should also be careful not to carry the lights too high, as the damp being light occupies the upper stratum. We were taken into the chambers, where it was supposed this formidable enemy had rested, with Davy's safety lamp, to see it burn and explode within the gauge, quite innoxious. Nothing can be more safe and beautiful than the action of this lamp, when in good order, and with its careful use no accident should occur; but unfortunately the persons, for whose benefit it was designed, are too often thoughtless and fool hardy, and pay with their lives the penalty of their temerity. In the whole range of chemical science there is, perhaps, nothing to compare with the profound inductive reason and experimental research, which led to this most important discovery; and never has that true philosophy which, content not with mere

speculative theories, aims at ascertaining the elements of things, and rendering all nature tributary to the wants of man, achieved, if we look at results, a greater triumph, nor been crowned with more complete success. This instrument, so simple in its construction, yet so admirably adapted to its purpose, serves as a striking illustration of the value of science, and the mastery which high intellect may obtain over inanimate matter. Thus that difficult problem, which had for centuries baffled the *practical wisdom* of the world, was solved in a few hours by the philosopher in his laboratory. The coal mines of England may be justly regarded as the basis of her prosperity, and without them her rich ores would lie valueless in the bowels of the earth, her manufactories would be deserted, her commerce annihilated, and the skill and energy of her operations be paralyzed. Yet, until this discovery by Davy, the most frightful explosions, attended by a lamentable loss of life and property, were most frequent; but now they need never happen, and rarely take place, and when they do occur are *always* the result of carelessness. It was thought by some persons, that free hydrogen gas existed in the atmosphere of coal mines, but this notion is now, I believe, *exploded* without doing much injury. The subjects of fire damp I may return to again more in detail, when visiting the bituminous coal mines of New-Castle-on-Tyne, as it is becoming every day more important that we should be well acquainted in the United States with its nature, and the best means of rendering it harmless.

The coal in this mine is usually worked by picks and wedges, but sometimes is blasted in large masses. Many irregular seams run through it, affording great facilities for mining. The surfaces where the seams or joints occur, are perfectly smooth and glistening, as if they had been polished by attrition. Above the coal is shale, with vegetable impressions; below it, sandstone, with small nodules of iron ore. One stratum of coal is called the *Brass vein*, on account of the presence of *iron pyrites*—"strong indications of a *brass mine*," as an engineer once wrote in his field book! The strata are often disturbed, and occasionally much distorted; at one place it is seen suddenly to strike upwards, and, in a few rods further on, it descends again to its regular dip, having been thrown up by a dyke, which had not, however, disturbed it to any great extent. The Welsh anthracite is said to be inferior to ours. Some parts of the drifts are sustained by the natural roof of rock; other portions are arched, and others again supported by timbers. Train railways are carried through the different galleries, and the workmen load the cars as they quarry the coal, and these cars convey the mineral directly to the canal boats.

After leaving the colliery, visited Mr. Crane's anthracite iron works, at Ynscedyn. He claims to be the inventor of this process of smelting iron ore, and seems to succeed with it perfectly well. From 25 to 35 cwt. of coal, with about 15 cwt. of limestone, produce one ton of good pig iron. The furnaces, in which anthracite is exclusively used, are small, not being more than nine feet across the boshes; but, he says, they may be built twelve feet wide. Another furnace, fifteen feet across the boshes, is worked with a mixture of anthracite and coke. This is called by the workmen *physicking the anthracite*. Mr. Crane, in all cases,

uses the *hot blast*, which, with anthracite fuel, is *essential* to complete success. He thinks the iron is equal in quality to that produced by charcoal, and is preferred for most purposes to that reduced by bituminous coal or coke; but he has not succeeded in substituting this species of fuel for the others used in the puddling and refinery furnaces, as I understand they have done in Pennsylvania. Mr. Crane sells his iron in pigs, having no rolling mills.

My next visit was to Mr. Llewellen's sheet-tin works. The *best* Blaenavon or Monmouthshire iron pigs are broken up, melted, and run into a charcoal refinery. It is then taken out in large white hot masses and put under a heavy trip-hammer, which crushes and moulds it as if it were a ball of snow. It is then reheated and beaten in like manner by another trip hammer into short irregular bars, and then rolled into *bars*. From the rollers they are passed into a machine which cuts them, as if they were pasteboard, into convenient lengths. Each bar or piece is then rolled and doubled until it is brought into the usual size of sheet tin, and consists of eight laminæ. To the eye it is one homogeneous mass of *very malleable iron*, without flaw. It is then marked with the required dimensions, clipped by machinery to those dimensions, then carried to a table where the laminæ are divided, and eight sheets are made of one. This is done by turning down one corner which partially separates the leaves; and the corner of the exterior laminæ is seized by the thumb and forefinger and stripped off, and the others are successively removed in the same manner, a knife being occasionally used to effect a partial separation. They are then bent or doubled into the form of a pent-house, by hand, and placed, for a short time, in a furnace to be annealed. They are then dipped in liquid muriatic acid to remove the oxydation, then rolled out smooth, cold. The sheets are then rubbed with fine sand and water, and are then immersed in a weak solution of sulphuric acid. In the mean time, a large pot, as *big as a pot-ash kettle*, has been placed over a furnace, and filled with oil, tallow, and *block* or *pig* tin, and the whole mass fused together. Into this bubbling caldron, after much toil and trouble, the iron plates are immersed, and when removed, are found covered with tin. But to complete the operation, they are introduced successively into three other receptacles of a similar fluid, but of a progressively better quality. They are then dipped into a boiling mass of thick lime and water, which seems so to *fix* the tin, and to remove the impurities. The plates are cleansed and brightened in tubs of wheat bran, where they are well rubbed—(nearly all the light labor being performed by females.) This completes the process, and these plates are the usual tin of commerce. The block tin is brought from Cornwall, and is worth in Swansea, about £100 per ton. This establishment is very large and is understood to be profitable.

December 8th.—Left Swansea this morning at 6 o'oclock for Cardiff, which reached at half past 11 A. M. The ride was through a very beautiful and picturesque country. The coach loaded down with passengers, luggage, and game. Breakfasted, dressed, and called to deliver my letters to Captain Smythe, R. N., superintendent of the affairs of the Marquis of Bute. Then walked down to the harbor and saw Lieutenant Donkfield, harbor master, who gave me a note to Mr.

John Smeaton, the engineer charged with the construction of the magnificent Bute Ship Dock.

December 9th.—After breakfast went with Mr. Smeaton and Mr. Blews, the local superintendent of construction, to examine the new dock and harbor. This is perhaps the most extensive work, with the exception of the *Duke of Bridgewater's canal*, ever undertaken and finished by one individual. This improvement has been made by the Marquis of Bute, at his sole expense, at a cost of nearly £300,000. The location was chosen by Mr. Telford, and the design and execution were entrusted to Mr. Cubitt. It seems that the proper precautions, however, were not taken effectually to secure the foundations for the massive lock, which, in consequence of the pressure of the water, and the defect already mentioned, threatened to give way. As the water had been drawn off, and the repairs were being made, the whole of the forebay having been taken up, it afforded me a fair opportunity of examining it to advantage, and seeing its internal structure. Captain Smythe politely furnished me with the plans of the work, the map of the site, and chart of the exterior harbor. This improvement comprises a ship canal 4,000 feet long and 200 feet wide, with massive quay walls on either side, coped with blocks of chiselled granite. The canal or basin, for 1,500 feet in length, is calculated for 19 feet depth of water, 1,200 feet for 13 feet depth, and the remainder shallows to 9 feet. The basin is supplied with water by a navigable feeder from the Glamorganshire canal, or rather from the river Taaf. When it rises to 19 feet above the mitre-sill of the forebay, it is *wasted* over a weir into a large artificial pond, from whence the excess is discharged into the tide basin. This surplus water serves to keep the tide basin free from silt; by being admitted through a sluice over a fall of nearly 20 feet at half ebb, its velocity removes the sediment which had been deposited by the previous flood tide. The exit from the canal is through a lock 156 feet long by 36 feet wide, (through which a ship of 1200 tons burden, laden with timber, was passed the day the dock was opened,) into a tide basin, capable of holding 3,000 tons of shipping, shut in by a tide gate 45 feet wide, which is opened at 3½ hours' flood, when the tide outside rises to the height of the water within, and vessels pass out to sea through a channel which has been excavated in the mud, half a mile long and 150 feet wide, stretching from north to south; and as the winds prevail in that direction, vessels are generally enabled to hoist sail in the tide basin and put out directly to sea; and in like manner they may frequently sail into the basin without furling canvass or dropping anchor. Buoys mark the channel on either side, by means of which vessels may warp in and out. The masonry is all of the best granite, and built in the most solid manner; all the facings of the lock and tide basin, and the copings throughout being cut work, and every portion of the structure exposed to the action of water being laid in hydraulic mortar. The stone from which this lime is obtained belongs to the *Lias*, and is brought from Aberthaw, in Glamorganshire, and is found in rolled masses on the beach, having been separated from the clay with which it is enveloped when *in situ*. It is burnt and slacked like *fat lime*, and is mixed in the proportion of two lime and one sand. The other limes (the Dorking for instance) is mixed one

lime and three sand, and is ground like ours. The Aberthan is regarded as making the best mortar, in quality, of any lime in England, but it is in cases requiring cement of an extraordinary good quality, mixed with a small proportion of puzzolona.

The Marquis of Bute, who is an extensive land proprietor and mine owner in Wales, was induced to incur the large expenditure already mentioned, in consequence of the very inadequate accommodations extended by the old works to the immense commerce, in coal and iron, which has recently sprung up in this region, especially from Merthyr Tydvil. The Glamorganshire canal, which follows up Taaf vale to Merthyr, is 25 miles long, with a lockage of 480 feet, and cost nearly £200,000. The dividends are limited by law to 10 per cent. per annum, yet, so enormous is the traffic, that after affording every possible facility to trade that the dimensions of the work would admit—reducing the tolls to a minimum—keeping it in good repair, and paying liberal salaries to all its employées, there are periods every year when the navigation is declared free, in order that the funds from the tolls may not accumulate in the hands of the company. The same remarks, as it regards profits and the incapacity to satisfy the demands of trade of canals leading to mineral districts, are generally applicable to that class of works in England; but with a happy foresight, the evil of too small canals has been measurably avoided in the United States, especially in planning the Chesapeake and Ohio Canal.

The debouche of the Glamorganshire canal, on the harbor of Cardiff, and the wharfage on the basin, are quite inadequate, from various causes, to vent the tonnage which the occupation of the canal to its ultimate capacity might bring down; and to supply the deficiency by affording another, more capacious, and in every respect a better debouchure, seems to have been the principal object with the Marquis in expending so large a sum of money for a mere utilitarian purpose.

At 3 o'clock, P. M., left in coach for Merthyr Tydvil, the centre of the great Welch coal mines and iron works. The canal already mentioned leads up the beautiful and richly cultivated valley of the Taaf; a railway is also in progress of construction, 16 miles of it being in use. Passed, on our ride, many furnaces and forges—fine effect produced by them after dark. Reached Merthyr at 6½ in the evening.

December 10th.—Visited Mr. Hill's works, called the Plymouth Iron Works. This gentleman is regarded as one of the most skilful and scientific iron masters in Wales. He recently bought a large quantity of cinders from a neighboring establishment, from which he extracted 60 *per cent.* of metal. The owners having learned this fact, refused to sell him any more, and attempted, but in vain, to obtain the same results, by remelting their scoria. The science, however, which enabled Mr. Hill to ascertain the value of the refuse of his neighbors' furnaces, and to turn this knowledge to good account, was wanting, and failure was a necessary consequence.

Then went to the establishment of Mr. Crawshawe, believed to be the largest belonging to any one individual in the world. The furnaces are worked exclusively

with the *cold blast*, and the coal is used in its natural state. The coal of this district is said to be the best in Wales, and the iron reduced by it is of a good quality. It is now generally admitted that the character of the metal is deteriorated by the *hot blast*, whether for malleable or cast iron; but there are so many recommendations in its favor, and as it produces metal sufficiently good, when the fuel and ore are not inferior, for the most of purposes, it is pretty generally used.

After dinner went to the Dowlas works, under the superintendence of Sir John Guest, who is also the principal proprietor. These are said to be the larges works in the world. They are most wonderful, not only for their extent, but also for the admirable system with which they are conducted. The local or native ores (or the *mine* as it is here universally called) are the argillaceous carbonates or the clay iron stones of the coal measures. They are first roasted, and generally mixed with a small proportion of *coast-borne*, or "*foreign ores*," as they are termed, from Cornwall, Devon, Lancashire, and Bristol. They are carried to the furnaces, where they are mixed with a proper charge of coal or coke and lime. The proportion of these substances depends on so many circumstances, as well as the quality of the metal it is proposed to make, and the nature of the blast, that no precise rules would apply; and the exact quantities can only be obtained from experience and a knowledge of the character of the ores. In a general way, it may be said to require, with the cold blast, nearly 3 tons of coal to produce one of iron; and the lime stone with the local ores is mixed in the proportion of 3 to 5½. So far as this is concerned, the *hot blast* is not much of an improvement, and it is not therefore as much used in Wales as in other parts of the kingdom.

The stack and cupola furnaces are indifferently used, there seeming to be no preference given to either form, and they are built according to circumstances; and you will sometimes see them combined in the same establishment.

The furnaces are usually tapped twice in 24 hours. The melted metal is drawn directly into the refinery, where it runs through burning coke, or still better char coal, producing the most brilliant scintillations. From this it is run out into a large form, and cold water thrown on it while yet in a molten state. This causes it to boil or bubble, owing to the escape of the steam, which brings with it the cinders to the surface. As soon as it cools, it is broken up and taken to the puddling furnaces, from whence it is removed in large *white hot* balls, on a truck, to a ponderous trip hammer, to which it is subjected till beaten into the form of a rude bar. It is then carried to the rollers, and passed through them from 5 to 8 times, each time becoming more dense, and approximating to the required form, which it at last attains. The above is the process through which I saw it carried from the ore. To convey some idea of the nicety with which the rollers are made, I will state that, when ordering iron for a railway, I have had the patterns made in wood to certain dimensions: then calculated the weight per linear yard, which was embodied in the specifications for the rails; and they have been rolled with so much precision as scarcely to vary in any appreciable amount from that specified. The difficulty in producing this nice result you can readily imagine.

At this establishment the tap is never run into pigs when intended for *malleable*

iron. The pig metal is usually the excess of the tap that the refinery will not contain, and is generally used for castings. The more gray the color of the refined iron, the better is its quality. The cinders, both of the refinery and the forge are remelted—the latter being of a better quality but not so rich as the former—the one yielding about 40 and the other about 60 per cent.

There is here a very ingenious mode, which I have also seen elsewhere, to elevate or lower the materials which may be required for different parts of the works. It is by means of a water tank, which wastes its water in a certain ratio, so as to produce a nearly uniform velocity in its vertical movement.

The Dowlas works consist of 20 large furnaces, numerous forges and rolling mills, and gives occupation to about 5,000 persons, with an average expenditure of near £40,000 per month.. The nett profits are variously estimated to range between £100,000 and more than £200,000 per annum.

An excellent kind of fire-brick is made here, and I am told that some of the furnaces have been kept in constant blast for 25 years, without the hearths having been burnt out. You can imagine nothing more imposing than this view at night, with the whole valley in one *broad glare* of light from the furnaces and forges, and filled with the clash and din of the ponderous trip-hammers.

December 11.—Left this morning at 7 o'clock, for Pontypool, by the way of Tredegar. Called at the works of Thomson, Humfry, & Co. There are here *seven blast furnaces* in operation. Besides the local ores, they use the Cornish, Devon, and Lancashire. The very best are from the Haytor mines from Cornwall, both in yield and quality. It gives about 60 per cent. The next is from Lancashire, the botryoidal brown hematite. Much of the Cornish ore is a species of red ochre in a pulverised state; and the Devonshire a kind of red hematite. Mr. Humfry, the very intelligent agent and co-proprietor of these works, informs me that the native ores, or ores of the coal measures, are quite equal in richness and quality to most of the *coast-borne* ores. They are compelled to coke all the coal consumed here, as it contains too much bitumen to burn freely in blast furnaces. For ordinary purposes it is not much coked, losing about one-fourth of its weight; but when intended for the refinery, it loses about one-third. They do not here draw out the crude metal in the refinery from the tap, as at Dowlas, but run it into pigs, which are broken and then re-melted in a refinery with coke, and again drawn off. I here noticed a very ingenious method of preserving the nozzles of the blast pipes from burning, three of which terminate in each refinery. It is by passing a constant stream of cold water through the annular part of the pipe, which runs out warm but not hot. Without this contrivance the nozzles would soon be consumed. From the refinery the iron is carried through the usual processes of puddling, rolling, &c. &c.. according to the uses for which it is designed. Saw it drawn out into long red ribbons for hoops. Then went to see railway iron rolled; very similar to that described at Dowlas. At these works many rails have been manufactured for America. They were rolling iron while I was present for the "Athens Branch Railroad," Georgia; weight 17½ lbs. per yard—broad at bottom and narrow at top, to be fastened down by spikes through the

lower edge. Saw rails for the Magdeburg road, Prussia, of the same form and weight with the patterns I had sent out two years ago, and which were rolled at a neighboring work. Next went to the nail mills. The puddling bars are cut into short pieces, which are re-heated, carried through three pairs of rollers, then through a slitting roller, cutting them into thin rods, about 6 feet long, which are cut up and headed into nails of the required size, by machinery. The most of this labor is performed by boys, who exhibit much dexterity.

These works are well conducted, and are understood to be profitable; they give employment to about three thousand persons, and a large amount of coal is annually sent to Newport for exportation. The coal and iron occur near the furnaces, and alternate with each other. The limestone is also found close at hand.

The distance from Merthyr to Pontypool is 25 miles, through a rough but interesting country. As we approached Pontypool we passed the very large artificial reservoirs for the supply of the Monmouth canal. There is a tram road from Tredegar to Newport for carrying down coal and iron.

December 12th.—Started this morning on a visit to the iron works and mines in the vicinity of Pontypool. First stopped to look at the "*Vortig works,*" small for this part of the world, and said not to be well managed. Saw nothing new; they were principally engaged in rolling railway iron. Went from thence to the *Blaenavon* works, celebrated for producing iron equal to the best in England for any purpose, especially malleable and ductile iron—it may be drawn into very fine wire. At these works they never mix the local with other ores; and it is said that the native ores, or *mines* as they are called, are superior to any that have as yet been found in this region. They are brought up from deep pits, and are found alternating with the coal, being frequently encased in shale. The very best yields about 70 per cent. Cinders are not allowed to be mixed with the metal extracted at these works. The most of the iron is sold in pigs, which are in great demand for the manufactory of sheet tin. Saw very large moulds for casting pipes; brought with me specimens of the ores and of the refined iron. The coal of this region is quite bituminous and sulphurous, and cannot be used for any metallurgical purpose without first being converted into coke. The slag is here drawn off into pits, in each of which is placed a pyramidal cast iron post with a hole through it near the top. The slag runs all around it and becomes attached to it. When cooled, the mass of slag is raised by a crane, with a chain passing through the cast iron post into an iron truck and carried off. No use can be made of this material except when it is run into moulds, which is sometimes done, for building purposes, and houses, walls, and bridges are often constructed of it. The accumulation of scoria, near large iron works, become a serious inconvenience from the want of space on which to dispose of it.

From Blaenavon went to *Abersychan*, (pronounced *Aber-sa-chan,*) one of the many works belonging to the powerful British Iron Company, under the superintendance of Mr. Wood, who has acquired a high reputation as a practical geologist and iron founder. There are six furnaces in one stack, (five being in constant blast,) compact and well built. The rolling mills are extensive, and on the

whole it struck me as a remarkably well regulated establishment. The ores are good, and yield from 35 to 55 per cent.; they also use here, for admixture, some of the imported British ores. *The mine* and coal alternate, and are brought up through shafts from 90 to 200 yards deep. All the machinery for pumping water and elevating the fossils is very well arranged, especially the manner in which the power is transferred from the engine-house to distant shafts. Mr. Wood has very kindly furnished me with a number of *railway patterns*, (cut from the rails,) of the most approved forms, which I intend for the "National Institution." I have also procured from this locality several specimens of shale, with beautifully distinct impressions of ferns, &c. I will here also observe that I have made an extensive collection of ores, shales, forge and refining cinders, and refined iron, from the numerous works I have visited in Wales; also of copper ores, scorias, and specimens of the metal in its various stages of manufacture.

In general terms, it may be said, in reference to the use of coals in their natural state, that when they contain no deleterious substances, they may be employed for the reduction of ores, in well-constructed furnaces, with the *cold blast*, when the bitumen does not exceed 20 per cent.; and with the *hot blast* when it is not beyond 25 per cent. The only difficulty with the *pure* coal is in its agglutinating properties, which prevent a free circulation of a draft of air and flame; but this very quality is a recommendation for the forge when a *hollow fire* is required.

In making railway iron it is admissible by common law, (and, indeed, it does not materially injure the metal,) to use from 15 to 20 per cent. of refinery of forged cinders, unless expressly prohibited by contract. When that is the case, it is called *mine No.* 3, and contains no cinders whatever. The advantage of this is that it resists oxidation rather longer than the cinding iron, but is not in the first instance much stronger or in appearance any better.

Pont-y-Pool contains about 11,000 inhabitants and was the heart of late Chartist movement, under Frost, on the good town of Newport. It was here that the present system of *rolling and slitting* iron, and the process of *tinning iron* was first introduced by Hanbury Leigh, Esq., now Lord Lieutenant of the county of Monmouth, and an extensive proprietor of landed and mining estates.

I have to-day learned from official statements, that in what is called the Swansea district of Glamorganshire, South Wales, there are raised annually 4,000,000 tons of coal, of which, 2,000,000 are consumed for iron works, 300,000 for copper, 200,000 for other purposes, and the remainder are shipped to other parts. These facts may serve to convey some idea of what may be expected to be done, in a few years, in our own most highly favored mineral districts, the parallel of which I have not yet seen abroad.

I have not been able to obtain an analysis of the Welsh anthracite, but the following of the Swansea bituminous coal may be relied on as authentic, viz: Carbon, 73.5; Bitumen, 23.1; Earth, 3.4.

As the Swansea coal is considered as belonging to the *very* best of British coals, it may not be uninteresting nor inappropriate to insert the following analysis by Mr. Mushet of the American Cumberland coal. So many analyses have been

made in the United States by eminent chemists, that it is unnecessary to repeat them here, it being presumed they are well known at home; I will only remark that Mr. Mushet's results are strikingly coincident with them, Mr. Mushet is considered as amongst the very highest authorities in all matters relating to coal and iron. "The specimen of coal sent is *the very best bituminous coal I ever saw.* I should consider it well adapted to iron making. It contains, and will form as much weight of coke, from a given quantity, as the best South Wales furnace coals. Composed of gas, 18.400; pure coal, 79.968; fawn colored ashes, 1.632 = 100.000."

[After the above notes were entered in my journal, I was enabled to procure the following additional analyses, which I have thought it proper to incorporate in this paper, viz:

Names.	*Species.*	*Carbon.*	*Volatile Matter.*	*Ashes.*
Llanedi	Anthracite	89.85	8.67	1.50
Merthyr Tydvil	Bituminous	85.60	13.40	1.
Cannel	Do.	75.2	21.7	3.1
Pool coal of Llanelli	Do.	77.8	19.8	2.4
Clyde Glasgow	Do.	64.4	31.	4.6]

The Welsh coals have always been preferred for working the celebrated Cornwall steam engines, and it has been suggested that their superiority and extraordinary performances may be attributed, in no small degree, to the nature of the fuel. I shall, however, touch but lightly on this matter at present, reserving the whole subject of British coals for a future paper, if I should find the leisure to enter on so important an investigation.

December 13th.—Left Pontypool at 10 o'clock in the morning for Newport, on my return to Bristol. Newport is a fine large town, the rival of Cardiff, and the port of Monmouthshire. It is from this place a large portion of the railway iron for the United States is shipped. They are building a large dock and basin that will greatly facilitate trade when finished. The roadstead is very good for this part of the coast.

After leaving Newport, passed through Chepston, a very interesting old town, the Episcopal capital of the see of Llandaff. A very elegant cast iron bridge spans the river, over which we passed immediately after leaving Cheston. The ride from Pontypool to Bristol is through a truly beautiful country; crossed the river Severn in a steamboat about 10 miles from Bristol, which reached at 7 o'clock in the evening.

December 14th.—Devoted this day to looking through Bristol, and visiting, among other matters of interest, the mammoth *iron steam-ship*, now on the stocks, intended for the New York trade. She is 280 feet long on the keel; 330 on the upper deck, and is calculated for 3,000 tons burden. Her engines 1,000 horse power, and she is to be propelled by the Archimedean screw, placed on the keel in the stern. The screw is composed of three helices, is 12 feet long, and about 4 feet diameter.

The advantages of this arrangement are supposed to be very great, and to con-

sist in part of the following, viz: more speed, better *sailing*, (having no wheel houses to impede her motion through the water;) a thousand tons more stowage, and greater safety (as the most vulnerable part of steamers is in the wheels, and the screw is placed beyond the reach of danger.) She is built entirely of well proved rolled iron. The ribs are forged to the required patterns, and the sheets similar to the plates of steam boilers, are secured to the ribs and frame work by screws and nuts, and are fastened together by bolts rivited when red hot, in the usual way of connecting iron sheets. The ship is then *caulked* and *pitched* like any other vessel. The holes in the ribs and plates are punched by a slow moving trip hammer, with a well tempered bolt or die connected with it, of the required size. This die seems to meet with no more resistance than from so much pasteboard. In a similar way, the metal is cut to any given pattern, by a continuous succession of holes. There will not be a particle of wood employed in the construction of the ship, except for the deck and the interior accommodations for passengers. It is supposed she will be ready for sea in the course of the year 1841.

10 AUG 1887

SECOND BULLETIN

OF THE

PROCEEDINGS

OF THE

NATIONAL INSTITUTION

FOR THE

PROMOTION OF SCIENCE,

WASHINGTON, D. C.

MARCH, 1841. TO FEBRUARY, 1842.

NATIONAL MUSEUM
NATURAL HISTORY

WASHINGTON:
PRINTED BY PETER FORCE.
1842.

CONSTITUTION.

Art. I. This Society shall be named "*The National Institution for the Promotion of Science.*"

Art. II. It shall hold its meetings at the City of Washington.

Art. III. It shall be composed of Resident, Corresponding, and Honorary Members.

Art. IV. The Resident members shall be persons residing in the District of Columbia; Corresponding members shall be persons residing out of the District of Columbia, who wish to aid the Institution by their contributions or communications; and the class of Honorary members shall be composed of eminent men residing out of the District of Columbia.

Art. V. Resident members removing from the District of Columbia shall, on request, be transferred to the list of corresponding members, and *vice versa.* But corresponding members may, at their option, be recorded and considered as resident members.

Art. VI. The Officers of the Institution shall consist of a President, Vice President, Twelve Directors, a Treasurer, a Corresponding, and a Recording Secretary; provided, that no member shall hold more than one of the offices created by this article at the same time, but that an acceptance of one shall be considered as a refusal of all others.

Art. VII. The Officers shall constitute a Board of Management of the fiscal concerns of the Institution; and any five members of the Board shall be a quorum for the transaction of ordinary business.

Art. VIII. The Secretaries of the Departments of State, Treasury, War, and Navy, and the Attorney General, and Postmaster General of the United States, for the time being, shall, with their consent, be Directors of the Institution; but upon the refusal of one or more of them to accede to the request of the Institution, such Director or Directors shall be chosen in the same manner as is herein provided for the appointment of other officers. The officers shall be elected for the term of one year, or until their successors shall be appointed, from among the resident members of the Institution. This election shall take place at the Annual Meeting; and each member, who is duly qualified, and shall be present at such meeting, shall have a vote in said election.

Art. IX. The Annual Meeting shall be held on the first Monday in each year, or as soon thereafter as may be convenient; the stated meetings on the second Monday in each month; and special meetings whenever five resident members shall concur in a request to that effect.

Art. X. The President, Vice President, or, in their absence, one of the Directors, in order of seniority, as named in Article VIII, shall preside at all meetings of the Institution, or if neither of them shall be present, the meeting shall elect its chairman.

Art. XI. The election of members shall be by ballot; and an affirmative vote of two-thirds of the members present at the meeting shall be necessary to the election. The candidate shall be nominated to the Institution at a regular meeting, and balloted for at the next regular meeting; and if there be more candidates than one, they shall be balloted for separately.

Art. XII. This Constitution shall be signed by all persons present at its adoption, who are desirous of becoming members of the Institution; which signature shall be proof of their membership. Resident members subsequently admitted shall subscribe the same on their admission; and neglect to do so for two months after their election shall render such election void. Each resident member shall pay to the Treasurer five dollars on his admission; and five dollars on the first Monday of January in every year thereafter, to aid in defraying necessary expenses, and for such other purposes as the Board of Management may direct.

Art. XIII. No resident member shall vote at any stated or other meeting of the Institution, on any question whatever, who has not paid his subscription and annual dues, or who shall not have attended a meeting of the Institution within one year previous to such meeting.

Art. XIV. The Institution shall have power to appoint Curators and others for the preservation and arrangement of its collections. The resident and corresponding members shall exert themselves to procure specimens of natural history, &c.; and the said specimens shall be placed in the Cabinet, under the superintendence of a Curator or Curators, so appointed. All such specimens, &c., unless deposited specially, shall remain in the Cabinet, and, in case of the dissolution of the Institution, shall become the property of the United States.

Art. XV. The resident members of the Institution shall be divided into such Departments as may hereafter be determined upon. The members composing each department shall especially be charged with the subjects embraced therein, and communicate to the Institution the result of their inquiries; but every member shall have the privilege of making such communications as he may think proper on any subject connected with the designs of the Institution.

Art. XVI. The various collections of the Institution shall be placed in the apartments which may be designated for that purpose by a majority of the Directors.

Art. XVII. This Constitution, with the exceptions of Articles 6, 8, 10, 14, and 16, or so much thereof as relates to the office of directors, their duties, privileges, or powers, or the purposes or place of keeping of the collections of the Institution, shall be subject to alterations and additions at any meeting of the Institution, provided notice of a motion for such alteration or addition shall have been given and recorded at a preceding regular meeting. No alterations or amendments shall ever be made in the articles above excepted, without the consent of a majority of the Directors.

Art. XVIII. A code of by-laws for the regulation of the business of the Board of Management, and the annual and other meetings of the Institution, and for matters relating to non-attendance, privileges, duties of officers, &c., shall be prepared by a committee to be appointed for that purpose.

SECOND BULLETIN

OF THE

PROCEEDINGS

OF THE

NATIONAL INSTITUTION

FOR THE

PROMOTION OF SCIENCE,

WASHINGTON, D. C.

MARCH, 1841, TO FEBRUARY, 1842.

PETER FORCE, PRINT.

PROCEEDINGS

OF THE

NATIONAL INSTITUTION

FOR THE

PROMOTION OF SCIENCE.

Stated Meeting, March 8, 1841.

Present, forty-eight Members.

Col. JOHN J. ABERT in the Chair.

The Meeting proceeded to the election of certain officers required by the amended Constitution :

Hon. JOEL R. POINSETT was chosen President; of which he was immediately informed, by a committee appointed to wait upon him for that purpose; and soon after appeared and took the chair.

PETER FORCE was elected Vice President.

The President elect then addressed the meeting:

GENTLEMEN: I should do injustice to my feelings on this occasion, if I refrained from expressing my grateful acknowledgments for the honor you have just conferred on me, and my high estimate of it.

Having always entertained the opinion, that the distinction attached to office is in proportion to the means it affords to serve our country; and firmly believing that the Institution over which your suffrages have called me to preside, may, if properly conducted, become extensively useful to all classes of our fellow-citizens, I feel proud and gratified at being placed at its head. No effort on my part shall be wanting to promote the objects and interests of the Institution, and I rely with confidence upon your indulgence and coöperation to make those efforts successful.

I shall be necessarily often absent from you; but the character and ability of the gentleman you have been pleased to associate with me, ensure at all times a diligent attention to the duties of your presiding officer.

This is the first experiment that has been made of a popular Institution of

Science; but as it is intended for the benefit of the people, it is right that they should take part in its administration. They are more likely to profit by information emanating from such a source; and I apprehend no danger from any improper interference on their part, with matters purely scientific. They are too intelligent not to be aware that such subjects must be entrusted to the officers and scientific branches of the Institution, and will I am sure cheerfully submit to their management of them.

It will be our duty to make ourselves acquainted with all useful and important discoveries in science, and present them in a cheap form to the people, especially all such discoveries as may be applicable to the arts, and useful to our manufacturers and mechanics; and they themselves ought to be encouraged to communicate to the Institution the results of their own observations and experience.

Although I hope and believe that Government will become convinced that the best disposition it can make of the Smithson fund, and that most suited to carry into effect the benevolent intentions of the testator, will be to confide its application to this Institution, I would not have you depend altogether upon that expectation. Let us rather place our reliance upon the coöperation of the other scientific Institutions in the United States, which have so manifest an interest in promoting our views; upon the support of the people, for whose benefit the Institution has been founded; and, above all, upon our own energies and resources, which, if zealously exerted and judiciously directed, will, I have no doubt, ensure our success.

Dr. Henry King was elected Curator of the Institution.

The following donations were received:

For the Cabinet.

Indian Pipe.—*From the Hon. Joel R. Poinsett.*

Robe made of the skin of the Grizzly Bear, with a collar of the claws of the Bear.—*From the Hon. Joel R. Poinsett.*

Map of the Coast, south of Cape Hatteras.—*From the Hon. Joel R. Poinsett.*

Copper Ores, from Current River, Missouri.—*From Hon. J. Miller, M. C., from Missouri.*

Box of ancient Coins.—*From Dr. T. B. J. Frye.*

A Ball made by the Greek females at Athens, of the marble of the Parthenon, and thrown from the Acropolis when it was besieged by the Turks.—*From His Excellency Martin Van Buren, President United States.*

For the Library.

Second Triennial Report of the American Mission Seminary, Jaffna, Ceylon, 1830.—*From Dr. F. Hall.*

Popular Lectures on Geology, by K. C. Van Leonhard, No. 3, 1840.—*From Dr. F. Hall.*

Tabulas de Don Gabriel Alijandro Real de Azua; Paris, 1839.—*From the Author.*

Pœsias diversas, by the same; Paris, 1839.—*From the Author.*

Treatise on the Uses and Advantages of compressed Peat; two copies.—*From the author, Alexander S. Byrne.*

Annual Report of the Geologist of Maryland, 1840.—*From the author, Dr. Ducatel.*

Astronomia Britannica; folio, 1669.—*From Franck Taylor.*

Notice of the Daguerreotype, by W. E. A. Aikin, M. D., 1840.—*From the Author.*

Theory of the Daguerreotype Process, by the same.—*From the Author.*

Catalogue of Phenogamous Plants and Ferns, native or naturalized, growing in the vicinity of Baltimore, by the same.—*From the Author.*

Introductory Lecture delivered before the Medical class of the University of Maryland, September, 1840, by the same.—*From the Author.*

Course of Reading and Catalogue of Books, recommended by Chancellor Kent, of New-York.—*From Samuel Sloan.*

Constitution, By-Laws, and Regulations of the Mercantile Library Association, Clinton Hall, New-York, March, 1840.—*From Samuel Sloan.*

Nineteenth and twentieth Annual Reports (1840 and 1841) of the Mercantile Library Association.—*From Samuel Sloan.*

Address delivered before the Mercantile Library Association, New-York, January 8, 1839, by J. H. Gouslie.—*From Samuel Sloan.*

Transactions of the Apollo Association for the Promotion of the Fine Arts in the United States, December 16, 1839.—*From F. Markoe, Jr.*

Mr. Whipple's Report on Mr. Otis's Letter; Boston, 1839.—*From F. Markoe, Jr.*

The Committee consisting of Col. Abert, Mr. Dayton, and Mr. Markoe, appointed to correspond with the Departments of Govern-

ment, was requested to confer with the Secretary of the Navy respecting the collections sent home by the Exploring Expedition, and to inform him that the Institution had appointed a Curator, and was prepared to receive and arrange them.

The Department of Geology and Mineralogy reported its organization for 1841, viz:

Col. J. J. Abert, *Chairman.*
Dr. F. Hall, *Vice-Chairman.*
Dr. H. King, *Secretary.*

A Circular, dated 13th February, and addressed to the following Societies and Institutions in the United States, in the name of the National Institution, soliciting their aid and coöperation in carrying out the national objects for which the Institution has been formed, and proposing to them exchanges, was read:

The Albany Institute, - - -	- Albany.
Academy of Sciences, - - -	- Boston.
Historical Society, - - -	- "
Society of Natural History, - -	- "
Statistical Society, - - -	- "
Historical Society, - - -	- Savannah, Georgia.
Maryland Academy of Sciences, &c.	- Baltimore.
Society of Natural History, - -	- Hartford, Connecticut
Historical Society, - - -	- " "
Academy of Natural Sciences, -	- Philadelphia.
Franklin Institute, - - -	- "
Rhode-Island Historical Society, -	- Providence.
American Antiquarian Society, -	- Worcester, Mass.
Western Academy of Natural Sciences,	- St. Louis, Missouri.
Mechanics' Institute, - - -	- " "
Lyceum, - - - - - -	- " "

Philomathic Society, University of Alabama, Tuscaloosa, Alabama.

Letters were read:—

From A. S. Byrne, on the best mode of propelling ships, &c.

From Major Jno. L. Smith, Engineer Corps, enclosing ten dollars, (two years subscription in advance,) and requesting that his name should be enrolled among the paying members.

From J. McHenry Boyd, Baltimore, enclosing his subscription as a paying member.

A report was read from the Committee to whom had been referred the communication of B. S. Roberts, Civil Engineer, which was accompanied by tools said to be manufactured from the *steel ore* of Franklin County, State of New-York.

Adjourned Meeting, March 15, 1841.

Present, twenty-seven Members.

Hon. Joel R. Poinsett, President, in the Chair.

The Committee requested at the last meeting to confer with the Secretary of the Navy, reported, that he had placed the collections of the Exploring Expedition under the care of the National Institution, and had promised to furnish necessary aid, and to meet the expenses to be incurred to the amount of $5,000, the extent of the appropriation made by Congress for the purpose.

The following donations were received:

For the Cabinet.

Specimens (in alcohol) of the Robin Fish, from New-York Bay.—*From F. R. Hassler.*

Two boxes Recent Land Shells.—*From J. G. Anthony, of Cincinnati.*

Wood of the Osage Apple Tree, or Bois d'Arc, (Maclura aurantiaca.)—*From Lieut. W. D. Porter, U. S. N.*

For the Library.

Address at the Anniversary meeting of the Royal Geographical Society, London, May 25, 1840, by J. B. Greenough, F. R. S.—*From Col. J. J. Abert.*

Second Annual Report of the Geology of the public lands belonging to the States of Maine and Massachusetts, by C. T. Jackson, Geological Surveyor; Augusta, 1838.—*From Col. J. J. Abert.*

Testament containing the Greek and Romaic text on the same page.—*From Lieut. J. M. Gilliss, U. S. N.*

Annals of Annapolis, by David Ridgely; Baltimore, 1841.—*From D. Ridgely.*

Proceedings of the Conventions of the Province of Maryland, held at the city of Annapolis, in 1774, 1775, and 1776; Baltimore, 1836.—*From D. Ridgely.*

Queries respecting the Human Race, to be addressed to Travellers and others; drawn up by a Committee of the British Association for the advancement of Science, appointed in 1839.—*From J. F. Polk.*

A letter was read from Mr. J. A. L. Norman, on the Osage Apple Tree, (referred to the Department of Natural History.)

The Committee requested to confer with the Members of the Cabinet in relation to their acting as Directors of the Institution, on the part of the Government, agreeably to the Constitution, reported, that the following gentlemen had consented to act as Directors:

Hon. Daniel Webster, *Secretary of State.*
Hon. Thomas Ewing, *Secretary of the Treasury.*
Hon. John Bell, *Secretary of War.*
Hon. George E. Badger, *Secretary of the Navy.*
Hon. Francis Granger, *Postmaster General.*
Hon. J. J. Crittenden, *Attorney General.*

The following gentlemen were then elected Directors, on the part of the Institution:

Hon. John Quincy Adams.
Hon. W. C. Preston.
Col. J. J. Abert.
Col. Joseph G. Totten.
Com. Lewis Warrington.
A. O. Dayton.

Stated Meeting, April 12, 1841.

Present, twenty-six Members.

Hon. Joel R. Poinsett, President, in the Chair.

The following donations were received:

For the Cabinet.

Marine Shell, with varieties of Coral attached, from the Coast of Florida.—*From Col. Hook, U. S. A.*

Large Corals, Coast of Florida.—*From Hon. Levi Woodbury.*

Medal struck at the celebration of the Shakspeare Jubilee in 1769.—*From Hon. Joel R. Poinsett.*

Wood of the Shakspeare Mulberry Tree.—*From Hon. J. R. Poinsett.*

Medal commemorating the opening of the Liverpool and Manchester Rail-Road.—*From Hon. Joel R. Poinsett.*

Fossil from Vicenza.—*From Hon. Joel R. Poinsett.*

Giallo Antico from Italy, *unpolished specimen.—From Hon. Joel R. Poinsett.*

Carrara Marble.—*From Hon. Joel R. Poinsett.*

Statuary Marble, from Frederick County, Md.—*From Hon. Joel R. Poinsett.*

One hundred and thirty specimens of North American Birds, set up in natural attitudes, and placed on stands, with a list of names, sexes, and habitats.—*From G. C. Leib, M. D., Philadelphia.*

2	Falco lagopus,	1	Troglodytes ædon,
1	" columbarius,	1	" hyemalis,
1	" peregrinus,	2	Sialia Wilsonii,
2	" fuscus,	2	Turdus migratorius,
1	" sparverius,	1	" mustelinus,
1	Strix nebulosa,	1	" polyglottus,
1	" otus,	1	" felivox,
1	" asio,	1	" Wilsonii,
1	Cypcelus pelasgius,	1	" minor,
1	Hirundo purpurea,	1	Regulus cristatus,
1	" fulva,	1	Parus bicolor,
2	Alcedo alcyon,	1	Sylvia parus,
1	Sitta canadensis,	1	" Blackburnia,
1	Troglodytes americanus,	2	" virens,

2 Sylvia americana,
1 " pardalina,
1 " striata,
3 " æstiva,
1 " cærulea,
2 " canadensis,
1 " castanea,
1 " pinus,
2 " coronata,
2 " varia,
2 " trichas,
1 Seiurus noveboracensis,
1 " aurocapillus,
2 Muscicapa ruticilla,
1 " tyrannus,
1 " acadica,
1 " trailii,
1 " crinita,
1 Icteria viridis,
1 Vireo olivaceus,
1 " noveboracensis,
1 " flavifrons,
2 Lanius septentrionalis,
1 " ludovicianus,
1 Garrulus cristatus,
1 Corvus americanus,
1 Quiscalus versicolor,
1 Sturnella ludoviciana,
1 Icterus baltimore,
3 " spurius,
1 " phœnicous,
2 " agripennis,
2 " pecoris,
1 Fringilla pennsylvanica,
1 " ludoviciana,
1 " canadensis,
2 " cyanea,
1 " cardinalis,
2 Fringilla pusilla,
1 " socialis,
1 " purpurea,
1 " melodia,
2 " americana,
1 " tristis,
1 " passerina,
1 Emberiza nivalis,
2 Pyranga rubra,
1 Alauda cornuta,
1 Picus erythrocephalus,
1 " carolinus,
1 " pubescens,
1 Colaptes auratus,
1 Coccyzus americanus,
1 " erythrophthalmus,
1 Columba carolinensis,
1 Ortyx virginiana,
1 Tetrao umbellus,
1 Charadrius semipalmatus,
1 " melodus,
1 Squatarola helvetica,
1 Strepsilas interpres,
1 Ardea nycticorax,
1 " virescens,
1 Tringa semipalmata
1 " alpina,
1 Totanus semipalmatus,
1 " macularis,
1 Limosa hudsonica,
2 Rusticola minor,
1 Rallus elegans,
1 " crepitans,
2 " carolinus,
1 Sterna hirundo,
1 " arctica,
1 " minuta.

Geological Map of England and Wales, by G. B. Greenough, F. R. S., President of the Geological and the Royal Geographical Societies; London, 1839; colored, and mounted on rollers.—*From Hon. Virgil Maxcy.*

Griffith's General and Geological Map of Ireland, to accompany the report of the Railway Commissioners, showing the physical fea-

tures and geological structure of the country; constructed in 1836, and engraved in 1837–8; colored and mounted on rollers.—*From Capt. George W. Hughes, U. S. Top. Engs.*

Box of Shells.—*From R. T. Brumby, Tuscaloosa, Alabama.*

For the Library.

Medical and Physical Researches, by R. Harlan, M. D., 8vo.; Philadelphia, 1835.—*From Wm. Maclure.*

Opinions on various subjects, dedicated to the Industrious Producers, by W. Maclure, 2 vols. 8vo.; New-Harmony, 1831.—*From Wm. Maclure.*

Memoir of Lewis David von Schweinetz, by Walter R. Johnson; Philadelphia, 1835.—*From the Academy of Natural Sciences, Philadelphia.*

Biographical Sketch of the late Thomas Say, Esq., by Benjamin H. Coates, M. D.; Philadelphia, 1835.—*From the same.*

Notice of the Academy of Natural Sciences of Philadelphia; fourth edition; Philadelphia, 1837.—*From the same.*

Act of Incorporation and By-Laws of the Academy of Natural Sciences of Philadelphia; Philadelphia, 1840.—*From the same.*

The St. Louis New Era, 1st March, containing a table of Meteorological Observations.—*From Dr. B. B. Brown, of St. Louis.*

Address on the study of Natural History, by John G. Morris.—*From the Author.*

The Paradise within the reach of all men, by J. A. Etzter; Pittsburgh, 1833.—*From the Author.*

The New World, or Mechanical System, by the same.—*From the Author.*

Remarks on the Report of Captain Chappell on the Archimedean Screw, by A. S. Byrne; 50 copies.—*From the Author.*

Reports of cases treated in the Will's Hospital for the Blind and Lame, during three months of 1838, with Observations by Dr. Hays, one of the Surgeons of that Institution.—*From Dr. Isaac Hays, of Philadelphia.*

Description of the inferior Maxillary Bones of Mastodons, in the Cabinet of the American Philosophical Society, with remarks on

the Genus Tetracauladon, &c., &c., by Dr. Isaac Hays.—*From Dr. Isaac Hays, of Philadelphia.*

Description of a fragment of the Head of a new Fossil Animal, discovered in a Marl pit, near Morristown, New-Jersey, by Dr. Isaac Hays.—*From Dr. Isaac Hays, of Philadelphia.*

Description of a new Genus, and new species of extinct mammiferous Quadrupeds, by Dr. John G. Goodman.—*From Dr. Isaac Hays, of Philadelphia.*

Letters were read:—

From Professor Gerard Troost, of Nashville: Announcing his intention to make up a collection "of the Natural Products of Tennessee," for the Cabinet of the Institution.

From John V. Ingersoll, of Mineral Point, Wisconsin: Stating that he and Mr. Stephen Taylor had forwarded for the Cabinet of the Institution, specimens of remains of an ancient city, called Atzalan, and that they would shortly forward a communication on the subject.

From John Locke, Cincinnati: Recommending Mr. C. Evans' invention called the "Steam Safety Guard."

From B. S. Roberts, Plattsburgh: Describing measures he had taken to procure for the Cabinet of the Institution the Geology and Mineralogy of Western New-York.

From M. F. Maury, U. S. Navy: Enclosing a letter from Captain Hunter, of the Revenue service, offering to aid in making collections for the Cabinet of the Institution.

From Wm. R. Staples, Providence, Rhode-Island: Informing the Institution that the Collections of the Rhode-Island Historical Society would be regularly transmitted to it.

From Charles Baldwin: Suggesting the advantage of adding a Department of Statistics to the Institution.

From David Dale Owen: Stating that he had shipped the collection of Minerals and Geological specimens lately made by him, while employed by the United States General Land Office, and that he had added a series of the Maclure Minerals, presented by Alexander Maclure, of New-Harmony, Indiana.

From A. Bourne, Chilicothe: Stating that he had forwarded for the Institution six hundred and fifty specimens of Shells, viz:

3 Anatifera,	1 Pecten,	13 Planorbis,	1 Pteroceras,
2 Solen,	1 Ostrea,	20 Melania,	2 Strombus,
1 Mya,	2 Crepidula,	3 Melanopsis,	1 Cassis,
2 Tellina,	3 Ancylus,	2 Ampularia,	3 Purpura,
2 Donax,	3 Bulla,	13 Paludina,	3 Buccinum,
2 Astarte,	45 Helix,	1 Neritina,	2 Terebra,
12 Cyclas,	1 Succinea,	1 Natica,	2 Columbella,
5 Venus,	8 Bulemus,	1 Nerita,	2 Mitra,
1 Arca,	4 Achatina,	11 Littorina,	1 Marginella,
5 Alasmodon,	20 Pupa,	5 Lacuna,	1 Ovulum,
248 Unio,	4 Auricula,	2 Cerithium,	10 Cyprœa,
40 Anodon,	21 Cyclostoma,	2 Fusus,	14 Oliva,
1 Mytilus,	11 Limnœa,	1 Pyrula,	2 Conus.
4 Modiola,	6 Physa,	1 Murex,	

The Corresponding Secretary announced that two thousand copies of Bulletin No. 1 of the Proceedings of the National Institution had been printed, of which upwards of one thousand copies had been distributed, and five hundred copies set aside as a reserve for the future.

A Committee was appointed to correspond with the officers of the Navy and the Revenue service; to invite them to make collections of shells and other marine productions; and to point out the best mode of collecting and preserving them, for the Cabinet of the Institution.

It was *Resolved*, That the death of William Henry Harrison, late President of the United States, and an honorary member of the National Institution, be inserted on the Journal, with an obituary notice. And,

Resolved, That the President of the Institution be requested to appoint a member to prepare and deliver before the Institution an Address on the life and character of the deceased.

The Collections, Library, &c., of the National Institution, were ordered to be removed to the rooms appropriated to its use, in the new Patent Office, and the meetings of the Institution hereafter to be held at the said rooms.

Stated Meeting, May 10, 1841.

Present, forty-one Members.

PETER FORCE, Vice-President, in the Chair.

The following donations were received:

For the Cabinet.

Collection of Marine Plants, from the Coast of Rhode-Island, made and preserved by Mrs. Parker, in September, 1827.—*From Gen. D. Parker.*

Silver Coins and Minerals.—*From Mr. Kervand.*

Three boxes Chinese Insects.—*From Commodore Ballard, U. S. N.*

For the Library.

Two Lithographic copies of a Map of the World, from Ptolemy's Geography, published at Rome in 1508.—*From F. R. Hassler.*

Constitution and Plan of Education for the Girard College for Orphans, with an introductory Report laid before the Board of Trustees, by Dr. F. Lieber; Philadelphia, 1834.—*From the Author.*

Remarks on the Relation between Education and Crime; by the same; Philadelphia, 1835.—*From the Author.*

History and Political Economy as necessary branches of superior Education in Free States; by the same; Columbia, South-Carolina, 1836.—*From the Author.*

Popular Essay on subjects of Penal Law, and on uninterrupted solitary Confinement at Labor, &c.; by the same; Philadelphia, 1838.—*From the Author.*

On the Penitentiary System; by the same; 1839.—*From the Author.*

On International Copy-right, 1840; by the same.—*From the Author.*

Report on the Geology of the State of New-York, 1840.—*From W. W. Mather.*

Eight volumes of the Naturalist's Library, by Sir William Jardine.—*From W. G. Cranch.*

Numismatique du Moyen Age, &c., par Joachim Lelewel, 2 vols. 8vo., and an Atlas.—*From Mr. Kallussowski, West River, Md.*

Pytheas de Marseille, et la Geographie de son temps, par Joachim Lelewel.—*From Mr. Kallussowski, West River, Md.*

Monograph of the Bivalve Shells of the river Ohio, translated from the French of C. F. Rafinesque, by C. A. Poulson.—*From C. A. Poulson.*

New fresh water Shells of the United States, by T. A. Conrad.—*From C. A. Poulson.*

History of the Federal Government, for the last fifty years, by Dr. Alden Bradford.—*From the Author.*

Report of the Geological Survey of Virginia, for 1840, by W. B. Rogers.—*From the Author.*

Fifth Annual Report of the Geological Survey of Pennsylvania, by Henry D. Rogers.—*From the Author.*

Journal of a Voyage to New South Wales, with engravings, by White, 1 vol. 4to.; London.—*From J. G. Bruff.*

Letters were read:—

From A. T. Donnet, acting Chargé d'Affaires of the United States, Lisbon: Stating that he had forwarded a suite of polished and rough Portuguese marbles.

From Captain George W. Hughes, United States Army, Brussels: Stating that Mr. Foster, a corresponding member, had placed in his hands a collection of scientific books for the Institution.

From D. B. Warden, Paris: Announcing that the Minister of Public Works, of France, had authorized a collection of minerals to be made for the Institution.

From M. Quetelet, Astronomer Royal, Brussels: Announcing a present from him of a number of scientific volumes.

From D. S. Macauley, United States Consul, Tripoli: Offering to the Institution his collection of Ornithological and other specimens, and expressing a purpose of collecting for the Institution.

From Captain George W. Hughes, United States Topographical Engineers: Transmitting two communications; one being the first part of Observations on the Copper and Tin mines of Devon and Cornwall. The other, "Notes made during a tour through Belgium."*

* Published in the Journal of the Franklin Institute, Philadelphia.

From General H. A. S. Dearborn, of Massachusetts: In relation to the public grounds in the city of Washington.

A Committee was appointed to arrange the Library of the Institution, and to prepare a catalogue, &c.

Stated Meeting, June 14, 1841.

Present, forty-two Members.

PETER FORCE, Vice-President, in the Chair.

The following donations were received:

For the Cabinet.

Handsome Bronze Lamp, for the use of the Hall of meeting.—*From C. B. King.*

Indian Red Pipe Stone, from the Coteau de Prairie, Sioux country, middle part of the stratum.—*From J. N. Nicollet.*

Specimen from the top of the stratum.—*From J. N. Nicollet.*

Quartzite, overlying the Red Pipe Stone.—*From J. N. Nicollet.*

Spadix of the Elais Guiniensis, or Oil Palm from Liberia, Coast of Africa.—*From Pishey Thompson.*

Collection of skins of Birds, natives of Holland and Cayenne.—*From G. W. Vandenbroeck, U. S. Consul, Amsterdam.*

Skins of Quadrupeds, from Holland.—*From G. W. Vandenbroeck, U. S. Consul, Amsterdam.*

List of specimens presented by Mr. Vandenbroeck:

1 Crotophaga ani, *Cayenne.*
2 Parus biarmicus, *Holland.*
1 Fringilla cœlebs, *Holland.*
1 Tanagra cœrulea, *Cayenne.*
1 Picus, *Cayenne.*
1 Fringilla carduelis, *Holland.*
1 Falco æsalon, *Holland.*
1 Strix flammea, *Holland.*
1 Mergus serrator, *Holland.*
1 Caprimulgus europeus, *Holland.*
2 Picus viridis, *Holland.*
1 Alcedo ispida, *Holland.*
1 Tringa pugnax, *Holland.*
1 Rallus aquaticus, *Holland.*
1 Columba palumbus, *Holland.*
2 Motacilla lugubris, *Holland.*
1 Ampelis nigra, *Cayenne.*

QUADRUPEDS.

1 Sciurus europeus, *Holland.*
1 Mustela erminea, *Holland.*

Box of Minerals.—*From Professor Nathaniel Moore, of New-York.*

One hundred Geological Specimens, illustrating the Geology of the environs of Heidelberg, in Germany; with a Catalogue.—*From the Mineralogical Institute at Heidelberg.*

Silver and Copper Coins.—*From Mrs. Poinsett.*

Silver and Copper Coins.—*From Hon. J. R. Poinsett.*

Minerals, from Montgomery County, Pennsylvania.—*From J. Fornance.*

For the Library.

A Treatise of offences against the Realm, &c., by F. Pulton, Esq.; folio; London, 1609.—*From J. H. Causten, Jr.*

Miscellaneous Works of Colonel D. Humphreys.—*From J. H. Causten, Jr.*

Deputy Commissary's Guide within the Province of Maryland, 8vo.; Annapolis, 1774.—*From J. H. Causten, Jr.*

Theatre de Jean Racine, 4 vols. in 2; Paris, 1811.—*From James McClery, Jr.*

Researches concerning the Periodical Meteors of August and November.—*From Sears C. Walker.*

Journal of the Academy of Natural Sciences at Philadelphia, 7 vols., 8vo., and part 1 of vol. 8.—*From the Academy.*

Miscellaneous Pamphlets.—*From John Varden.*

Lavoisier's Elements of Chemistry, translated by Robert Kerr, 1 vol. 8vo., fourth edition, 1799.—*From John Varden.*

Analytical Table of a systematical Course of Lectures on Zoology, delivered at Princeton College, by Professor B. Jæger.—*From the Author.*

Collections of the Rhode-Island Historical Society, vol. 4.—*From the Society.*

Monographie des Melastomacées, par Humboldt et Bonpland, sixty-two colored plates, folio; London, 1833.—*From Pishey Thompson.*

Ainslie's Materia Indica, 2 vols., 8vo.; London, 1826.—*From Pishey Thompson.*

Autograph Letters of General Washington, and other distinguished

Revolutionary Characters.—*From Major W. H. Chase, Corps of Engineers, Pensacola.*

Memoirs, Papers, &c., relating to Singapore, Borneo, Java, Malacca, Sumatra, &c., 1 vol. 4to.—*From Francis Markoe, Jr.*

Abstract of the Massachusetts School Returns, for 1839 and 1840.—*From Thomas H. Webb.*

Prospectus of "L' Epistlemonomie, ou Tables générales d' indications des Connaissances Humaines," to be published by the Geographical Society of Brussels.—*From Mr. Vandemaelen.*

Catalogue of the Library of the Geographical Establishment of Brussels; Brussels, 1830.—*From Mr. Vandemaelen.*

Prospectus of "Geographie de Douze Dictionnaires," par Ph. Vandemaelen; Brussels, 1830.—*From Mr. Vandemaelen.*

Manuscript Catalogue of a School Cabinet of Minerals, by W. W. Mather.—*From the Author.*

First and Second Annual Reports on the Geological Survey of the State of Ohio, by W. W. Mather; Columbus, 1838.—*From the Author.*

Flora Cestrica, or Botany of West Chester, Pennsylvania, by W. Darlington, M. D., 12mo.; West Chester, 1837.—*From the Author.*

Essay on the Development and Modifications of the external organs of Plants, by W. Darlington.—*From the Author.*

Discourse on the Character, &c., of the Natural Family of Plants, called Graminiæ, or true Grasses, by W. Darlington.—*From the Author.*

Memoir of the Geographical Survey of the State of Delaware, by James Booth; 8vo.; Dover, 1841.—*From the Author.*

Meteorological Journal kept at the Washington Observatory, for January, February, and March, 1841.—*From Lieut. J. M. Gilliss, U. S. N.*

Essay on a new kind of Schools, and a Journal of Pedagogical Science, by Professor Carl. Mager, of Stuttgardt.—*From the Author.*

"Lithurgik," a German work on Minerals and Rocks, by Dr. T. Reinhard Blum, Professor in the Heidelberg Institute.—*From the Author.*

Geological Report of the State of New-York, for 1837.—*From Lardner Vanuxem.*

Geological Report of the State of New-York, for 1838, 1839, and 1840.—*From T. A. Conrad.*

Transactions of the Geological Society of Pennsylvania, 2 vols. 8vo.—*From C. A. Poulson, Jr.*

History of Coleopterous Insects, by F. L. de Laporte, Compte de Castelneau, No. 1 to 40, inclusive.—*From the Author.*

The American Farmer, May 26, 1841, edited by John S. Skinner, containing a plan for a Washington Agricultural Society to be connected with the National Institution.—*From the Editor and Author.*

The Chairman reported that Richard S. Coxe, Esq., had consented to deliver a Discourse before the National Institution, on the life and character of William Henry Harrison, late President of the United States.

The Committee to correspond with the Departments of the Government, reported, that the collection of Indian Portraits, and curiosities of the War Department had been deposited in the Cabinet of the National Institution, by the Secretary of War.

Whereupon it was

Resolved, That the Standing Committee of the National Institution for the purpose of communicating with the Departments of Government, be authorized to express to the Secretary of War the thanks of the Institution for the valuable and interesting deposit of Indian Portraits and curiosities, and that the committee request of the Secretary of War, for the use of the Institution, a copy of the lithographic plates and historical sketches connected with the portraits.

Washington, *June* 18, 1841.

Hon. John Bell, *Secretary of War,*
and Director of National Institution.

Sir: In conformity with a resolution of the National Institution for the Promotion of Science, a copy of which is herewith enclosed, we have the honor of presenting to you the thanks of the Institution for the valuable and interesting collection of portraits of distinguished Indians, which, by your direction, have been placed on deposit in the rooms of the Institution; and also for the interesting collection of Indian curiosities which were sent with the portraits.

And under the same resolution we have the honor of requesting for the Institu-

tion, one of the copies in the War Department of the lithographic prints and historical sketches having reference to these portraits.

We have the honor to be, very respectfully, your obedient servants,

J. J. ABERT, *Col. Corps Top. Engs.*
A. O. DAYTON,
F. MARKOE, Jr.
Committee National Institution.

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DEPARTMENT OF WAR, *June* 21, 1841.

GENTLEMEN: I have received your letter of the 18th inst., conveying the thanks of the National Institution for the deposit made by this Department, of Indian Portraits and Indian curiosities, and communicating the application of the Institution for one of the copies in the Department of the lithographic prints and historical sketches having reference to these portraits. These prints and sketches being properly appendages to the portraits, it gives me great pleasure to comply with the request. I have, accordingly, directed that a copy be sent to the Institution, to be placed on deposit with the portraits.

Very respectfully, your obedient servant, JOHN BELL.

Col. J. J. ABERT,
A. O. DAYTON, Esq.,
F. MARKOE, Jr., Esq.
} *Committee National Institution.*

The Committee on the Library reported that they had arranged the books, and presented their catalogue.

The Department of American History and Antiquities, to which had been referred the letter of Mr. Tefft, Corresponding Secretary of the Georgia Historical Society, inquiring for materials relating to the History of Georgia, upon which Dr. W. Bacon Stevens was engaged, made a report upon the documents in the Library of the Institution likely to be useful for the purpose.

The following communications to the Corresponding Secretary, were read:

From George Read, U. S. Consul, Trieste:

MALAGA, *March* 23, 1841.

DEAR SIR: I take the liberty of sending by the brig Isaac Franklin, Captain Wm. Smith, to New-York, a sample of cotton such as is cultivated on this coast, particularly in the District of Motril, fifty miles south of Granada, with a view of its being examined by some of those intelligent in the growth of the plant, and who will no doubt now be at Washington.

I am told, for I am no judge myself, that the description is very fine, and it appears to me that the longevity of the plant is a peculiarity, though, perhaps, that may be applicable only in climates like this, free from hard frosts; still I am induced

to send the sample, as it can never do any harm and may result in a benefit to the country.

You will find enclosed a notice of the mode of cultivation recommended here, which I have taken the trouble to extract, reduce, and translate, merely for general information; as no doubt our planters, if they should find it worthy their attention, would follow such plans as are found most suitable to their own localities, &c. Seed can be procured at any time, if desirable hereafter. I have sent samples to New-Orleans also, and I address this to you, supposing the subject not foreign to the views of the National Institution.

I feel highly honored by the contents of your letter of 16th December, ultimo.

I am, sir, most respectfully, your obedient servant,

GEORGE READ, *United States Consul.*

MOTRIL COTTON.

The cotton cultivated at Motril may be called the "Vine Leaf" plant. It grows best in temperate climates.

The soil should be light, open, and loamy, where, if necessary, it may be irrigated—arenacious, argillaceous, calcareous, and free from stones; very rich ground gives more foliage than blossoms. Ground too rich rots the roots, and dry, hard, tenacious, stony earth prevents their penetrating. The plant requires occasional moisture, either from rains, very heavy dew, or irrigation; and a general rule as to sites, well defended from winds.

The *earth* is prepared by deep hoeing (in Spain) at four periods; late in the autumn, in September, at the commencement of spring, and before planting. Northern exposures require planting in trenches, and preserve the young plants in severe weather.

Manure required only for poor lands; much manure makes the plant too flourishing. Cow dung for sandy soil, horse dung for clay.

Seed before planting should be soaked twenty-four hours in drainings from manure heaps; a ley of soot or ashes that they may sprout quickly, because much rain at the time of sowing is apt to rot the seed. This will be discovered if the plant is not up in eight or ten days, and must be renewed.

Planting may commence when there is no fear of frost, and just about when rain is expected.

Cultivation is either from nurseries or on the field; the first is best in coldish situations for the preservation of the young plants, for the selection of the healthiest sprouts for setting out, and as occupying less ground at this epoch. In the beds, sow in lines four inches apart and three deep, and the seeds about the same apart. There will be a facility and despatch in planting if the seeds are moistened and rolled in earth to prevent their adhering to each other. The beds and plants kept clear of weeds. The field planting is by raising ridges of about a palm high, a foot in width; and on the sides of which exposed to the sun, in holes three fingers deep, three palms apart, four seeds are placed. After the plants are up they must be cleaned of weeds and the ground kept loose around them.

For transplanting it will be observed that the plant in first coming up, with the

accompanying weeds, gets the better of them in luxuriance; but after some days, the contrary will be the case, and this is the proper time for transplanting them; this is done in holes, in rows three palms apart, four or five plants in a hole or hill, with sufficient space for a plough to pass. Weeds pulled up, and the weakest of the plants also, leaving only one in each hill. From the commencement of flowering to the dying of the flower the field should not be entered, it being injurious to shake the flower. If the plants become parched, water will restore them. If too luxuriant, no water, and even the head of the main shoot may be nipped off with the nails; which is also requisite, at all events, when the plant is about a foot high, in order to give force to the lateral branches, which produce more fruit than the main shoot.

The plant lives twelve years if well taken care of, and continues to produce; but here (in Andalusia) it is grubbed up after six years. The first year it is allowed to grow at discretion, unless too luxuriant. It is to be pruned in the spring of the second year, (that is, after having given one crop,) and trimmed down within six inches of the ground, cutting all off close to the main stem; next spring two branches are left close down about six inches long from the stem, cutting all others. Next spring all but three or four shoots are cut away in the same manner, the strength of the plant being considered. After about four months it commences to flower, and at this epoch every operation should be suspended that may shake the bush or brush away the flowers.

The plant has its infirmities, one of which is announced by the leaves turning yellow and falling off by degrees; this is particularly occasioned by sudden changes of temperature and rapid transition from heat to cold. This is mostly observed in May, and lasts about twenty days; if repeated, it is very destructive. High winds and frost, excessive heat or rain, with insects, &c., all are injurious to the plant, as well as to many other objects of agriculture.

From Dr. H. G. Bronn, Professor in the University of Heidelberg.—(*Translation.*)

HEIDELBERG, (GERMANY,) *April* 30, 1841.

The Zoological Museum of the University of Heidelberg, offers to foreign public and private museums, principally to those which are not yet richly provided with zoological objects coming from Germany or Europe, the exchange of the zoological productions of the respective countries, and proposes the following bases for this exchange, to render as simple and as little costly as possible, the acquisition of even the rarest specimens of zoology.

I. The exchange may be made to embrace every zoological object, prepared skins of vertebrated animals, reptiles, fish, mollusca, and worms, preserved in spirits of wine, dried insects, expanded and attached to pins expressly manufactured for that purpose, shells, &c.

II. Considering the difficulty and even the impossibility of finding—for a suite of birds, for example—the real equivalent in insects, &c., and to avoid a long and expensive correspondence between two distant countries, only animals of the same class will be usually exchanged, birds for birds, insects for insects. Only collections somewhat more considerable will be exchanged at the same time; as, for example,

fifty species of birds, a hundred species of shells, five hundred species of insects, in parcels of from one to five specimens each, for an equal number of species and specimens—the latter, however, to be only counted in their total. To compensate in case of extreme necessity, for the transmission, for example, of a number of species double that which could be returned, the number of specimens received should at least be doubled, without, however, selecting them from too small a number of species.

III. The Museum of Heidelberg will always send ticketed specimens; that is to say, accompanied by their systematic names and their habits. It expects the same rule to be reciprocally observed.

It will only accept in exchange two for one, at least of all those invertebrated animals and other specimens not ticketed, which may not in themselves possess an extraordinary value.

It also requires that the skins should usually contain the bones of the feet and bony heads.

IV. The two exchanging museums will keep lists of the specimens which will have composed all their exchanges, in order to avoid sending the same species a second time in exchange for new species. Accordingly, both parties will proceed to the exchange of species increasing in rarity, and consequently "in preciousness;" and will finish by the almost complete acquisition of a zoological collection, well ascertained, of a foreign country.

V. In fulfilling the conditions two to four, true equivalents may be expected. Small differences of value will be effaced by the continuation of this exchange on a large scale. With regard to the mammiferous and other classes, the acquisition and preparation of which are very costly, specimens of some equality will only be exchanged; a mouse will not be given for a stag. Should there be some specimens sent of peculiar value, it might be estimated in money, in order that the nearest equivalent may be chosen.

VI. The Museum of Heidelberg is subjected to this law: Not to send any thing by way of compensation to an individual before having received the articles for which compensation is to be made. But it may commence an exchange with all public establishments.

VII. Every museum that may wish to exchange on these bases will inform the Museum at Heidelberg how many species and specimens, and what class of animals, it wishes to exchange, and at what time it may be able to send them; it will be informed as soon as possible if the particular exchange is accepted or not, and when the compensatory exchange will be ready. It should be recollected that provisions of zoological specimens can only in general be made among us from the month of March to the end of September, (with the exception of some migratory species of birds, fish, &c., which arrive in winter,) and that in consequence an understanding should be had in regard to the exchanges to be made before the commencement of the ensuing season.

VIII. In case the museum to which this annunciation is addressed cannot accept the propositions, it is requested to have the goodness to send it to other possessors of zoological collections in its country, and invite their attention to it.

After having detailed these general bases, we have still a few words to address to the National Institution for the Promotion of Science at Washington in particu-

lar, the objects of which are known to us by its correspondence with the mineralogical establishment of our city.

IX. We desire to receive from it zoological productions of every sort, principally of that class which it may be pleased to receive from us.

X. We possess zoological specimens of our country and of foreign regions, designed for exchange, numerous insects, shells, &c. But we can also furnish, on a little notice, European animals of all classes.

XI. In forwarding to us, we recommend the way of New-York, (Mr. Ph. Lajeune,) or directly by Havre, in France, (Messrs. Wanner, Langert, & Co.)

The Director of the Zoological Museum of the University of Heidelberg.

Dr. H. G. BRONN, *Professor in the University.*

P. S. If acceptable to you, I offer an exchange of the petrifactions of your country for those of Germany and the neighboring countries. This exchange, however, only concerns me personally, and not in my capacity as director of the academical collections.

H. G. BRONN.

From Major W. H. Chase, U. S. Engineer Corps.—*(Extract.)*

Pensacola, *April* 15, 1841.

Sir: Through the kindness of Colonel Totten, United States Engineers, I have received a bulletin of the proceedings of your society.

Save some autographic letters of the men of the Revolution, I have nothing at my disposal to place among your archives.

I enclose these letters, (marked one to fifteen,) to be presented to your society. I have selected them from some family papers obtained from my grand aunt, Mrs. Hancock. Persons possessing similar relics could not do better than to make your society a place of deposit for them, as occasionally thereby interesting facts and explanations of Revolutionary doings might be obtained and preserved. Letters like these, written leisurely and without form, are a better key to men's thoughts and opinions, than studied orations, or the eulogy of friends and partisans. Words noted down and epistles preserved, are the only sure points of history, without which, the events of the world would be as fabulous as the Indian's tradition.

I have the honor to be, sir, very respectfully, your obedient servant,

WM. H. CHASE.

From Peter S. Du Ponceau, President of the American Philosophical Society of Philadelphia:

Philadelphia, *May* 6, 1841.

My Dear Sir: I have received your letter of the 21st ultimo, and also, by Mr. Ward, the four copies of your bulletin which you had the goodness to send me, for all which I beg you to accept my thanks. I shall be very glad to receive your amended constitution when it is printed.

I am very much pleased with the amendments you have made, as far as they are known to me. I am delighted to find that all the members of the Cabinet have consented to be placed in the list of your directors, honorary, I presume, as their more important business will require all their time; yet nothing will prevent

them from presiding over your meetings when they shall think proper; and I have no doubt that on great occasions you will hardly ever fail seeing at least one of them at your head. The temporary accommodations afforded you by Mr. WEBSTER do great honor to his head and to his heart. They show that he loves science for its sake, and that he is animated by the spirit of the age we live in. You are under a very great obligation to him, for, in the present state of your finances, I do not see how you could have gone on without that most opportune aid, at the time when future success depends in a great measure upon economy.

I feel the same pleasure in observing that you have placed the learned and venerable J. Q. ADAMS at the head of your list of *actual* directors. Minerva herself could not have inspired you better.

You still want a capital to your Corinthian edifice. By the constitution of the American Philosophical Society, the Governor of the State, for the time being, is *ex officio* the patron of that Institution. Why could you not adopt a similar rule? None deserve that honor more than our present Chief Magistrate. At the end of his term each President would, of course, leave the patronage over your Institution to his successor, but, in consequence of having filled that dignified station, he would remain an honorary member, *ipso facto*, and without a special election. In our Philosophical Society we have no honorary members, therefore our Governor, at the end of his term, falls into the ranks of a private citizen, and ceases to be connected with our Society, unless he was before a member of it. But you can do better in the manner which I have taken the liberty to propose.

In my last letter, I expressed to you my strong hopes of the ultimate success of your noble Institution. Permit me now to express to you the grounds on which that hope is founded. You have called all the nation to your aid, and it will answer your call. The example will be given by the numerous host of persons employed in the service of the Federal Government. All the civil and military officers, by sea and land, the Army and Navy, the Civil and Military Engineers, the Diplomatic and Consular agents, those amongst the Indians and elsewhere, those employed in exploring expeditions at home and abroad, and not only those, but all aspiring young men and others, through our vast extent of territory, who shall wish to make their names conspicuous and attract the notice of the Government, will vie with each other to send you their communications, by which they will hope places and honors at home and fame abroad, and no doubt many of them will succeed. These are the grounds of my hopes, and you will agree with me, I believe, that they are not altogether imaginary.

There is another class of citizens to which I would draw your attention—I mean that of Americans residing or travelling in Europe and other parts of the world. That class is very numerous; it consists, for the greatest part, of young men who go abroad to pursue different studies, and of travellers, many of whom go from home for the sake of instruction. That class, I believe, may be very useful to your rising Institution. What if your worthy President were to address them a kind of *pastoral* letter, explaining to them our objects, and requesting their aid? That paper might be printed in a small pamphlet and sent for distribution to all diplomatic and consular agents in Europe. I find that you have named Mr. POINSETT to that office; he can now serve you only from a distance, and that is precisely a task that he will undertake with pleasure and execute with effect.

You see that I avail myself of my privilege of membership, by throwing in my suggestions, *valeant quantum.* But privileges must not be abused. I have said enough to convince you, if you should need to be convinced, that the Institution is the frequent subject of my thoughts, I might even say of my waking dreams; for, when I give full scope to my imagination, and with the aid of a fancied telescope I try to pierce through the clouds that conceal futurity from us, I see a dazzling prospect which I shall not attempt to describe, but which I fondly hope will be realized.

I am exceedingly obliged to you for your last communication, which contains interesting details of the progress of the Institution, from which I indulge the greatest hopes of its success. You will do me the greatest pleasure by continuing the same favor, for no one can feel more interested than I do in that most important subject, on which the future glory of our country in a great measure depends.

My sight is much as it was when you left me. I made an effort to write you a few lines with my own hand, but that effort cannot easily be renewed. You see I am now obliged to use the hand of a friend, who is kind enough to lend me his assistance. The infirmities of age cannot abate my zeal for the advancement of science in our beloved country.

I am, with great regard and esteem, your friend and obedient servant,

PETER S. DU PONCEAU.

The Committee on the Library reported that the books were arranged, and submitted their Catalogue.

Stated Meeting, July 12, 1841.

Present, forty-six Members.

PETER FORCE, Vice President, in the Chair.

The following donations were received:

For the Cabinet.

Box of specimens of Calcareous Concretion from Anastasia Island, St. Augustine, Florida.—*From Lieutenant Benham, U. S. Engineer Corps.*

Two antique Roman Sepulchral Lamps.—*From Mr. Serruys, Chargé d'Affaires of Belgium.*

Box of native Insects.—*From M. McClery.*

Scarlet Ibis, (*Ibis rubra.*)—*From McClintock Young.*

Hygrometer for showing approaching changes in the weather, with a description of the instrument.—*From J. F. Callan.*

A collection of Fossils from the East Fork of White Water river, Indiana.—*From Lynde Elliot, Richmond, Indiana.*

Reptiles from West Florida.—*From Lieut. John S. Chauncey, U. S. N.*

Robin Fish, (*Prionotus tribulus.*)—*From Lieut. John S. Chauncey, U. S. N.*

Juaca from Peru.—*From Lieut. John S. Chauncey, U. S. N.*

Bronze antique Figure, from Pompeii.—*From Lieut. John S. Chauncey, U. S. N.*

Medal commemorating the union of the waters of Lake Erie with the Atlantic.—*From Lieut. John S. Chauncey, U. S. N.*

Coffee from Liberia, coast of Africa.—*From Lieut. John S. Chauncey, U. S. N.*

Palm Nuts from the coast of Africa.—*From Lieut. John S. Chauncey, U. S. N.*

Seed of the Teak Tree, from India.—*From Lieut. John S. Chauncey, U. S. N.*

Collection of Madrepores, Corals, Stalactites, &c., from the Bermuda Islands.—*From W. T. Tucker, U. S. Consul, Bermuda.*

Prairie Fowl, (*Tetrao cupido.*)—*From Philip B. Key.*

Gopher, (*Geomys bursarius.*)—*From Philip B. Key.*

Reptiles.—*From Dr. Frye.*

Cray-Fish, (*Astacus Bartonii.*)—*From Master Force.*

Datura metal.—*From Henry Stone.*

Meteoric Stone from Tennessee.—*From Professor Gerard Troost.*

Sulphate of Alum, &c.—*From Professor Gerard Troost.*

Collection of Unios, Anadonts, and other fresh water Shells, from the Tennessee river.—*From Professor Gerard Troost.*

For the Library.

The First Annual Report on the Geology of New-Hampshire, by Charles T. Jackson, State Geologist.—*From the Author.*

Memoirs of the American Academy of Arts and Sciences, vol. 1, and parts of 1 and 2 of vol. 3, 4to.—*From Francis Alger, Jr.*

Transactions of the Historical and Philosophical Society of Ohio, vol. 1, part 2.—*From Hon. J. Burnett.*

Report of Experiments by the Sub-Committee from the Committee of the Franklin Institute of Pennsylvania, on the explosion of Steam Boilers, to whom was referred the examination of the strength of materials employed in their construction; by Professor Walter R. Johnson.—*From the Author.*

Three volumes of the First Series of the New-York Historical Collections.—*From the New-York Historical Society.*

The First volume of the Second Series of the New-York Historical Collections.—*From the New-York Historical Society.*

Smith's History of New-York, 2 vols., 8vo.—*From the New-York Historical Society.*

Journal of the Franklin Institute, vol. 2, No. 1, July, 1841.—*From the Franklin Institute.*

Hume and Smollett's History of England, 1 vol., 8vo.—*From W. G. Cranch.*

The Monthly Anthology, 6 vols., 8vo.—*From W. G. Cranch.*

Exposition des Produits de l'Industrie Française; 1839; 3 vols., 8vo.—*From M. de Bacourt, French Minister to the U. S.*

Compte rendu des Travaux des Ingénieurs des Mines; 1839; 2 vols., 4to.—*From M. de Bacourt, French Minister to the U. S.*

Report of a Survey and Exploration of the Coal and Ore Lands belonging to the Alleghany Coal Company, in Somerset county, Pennsylvania, 1841, by Walter R. Johnson.—*From the Author.*

The American Senator, by Thomas Carpenter, 3 vols., 8vo.—*From John Varden.*

Medical Botany.—*From John Varden.*

Report of the Progress of Geological Survey of the State of Virginia, by W. B. Rogers, 1840.—*From the Author.*

The Third and Fourth, and two copies of the Fifth Annual Report of the Geology of Tennessee.—*From Professor Gerard Troost.*

The Members of the Columbian Institute for the Promotion of Arts and Sciences, were invited to become members of the National Institution, and to deposit in its Cabinet their effects, books, and papers.

The Committee in reference to the Address on the life and character of the late President of the United States, submitted its report

Whereupon it was,

Resolved, That the thanks of the National Institution be presented to RICHARD S. COXE, Esq., for his admirable and eloquent Address. And,

Resolved, That Richard S. Coxe, Esq., be requested to furnish the Institution with a copy of his Address for publication.

It was announced that the Minerals, Books, Manuscripts, and other articles forming part of the Smithsonian bequest, had been deposited in the Institution, by direction of the Secretary of the Treasury.

Among the effects of the late Mr. Smithson, which have been deposited by the Government in the National Institution, is a Cabinet which, so far as it has been opened and examined, proves to consist of a choice and beautiful collection of Minerals, comprising, probably, eight or ten thousand specimens. The specimens, though generally small, are extremely perfect, and constitute a very complete Geological and Mineralogical series; embracing the finest varieties of crystallization; rendered more valuable by accompanying figures and descriptions by Mr. Smithson, and in his own hand-writing. The Cabinet also contains a valuable suite of meteoric stones, which appear to be specimens of most of the meteorites which have fallen in Europe during several centuries.

It was reported that the Lithographic Portraits and Memoirs of distinguished Indians, had been deposited in the Library of the Institution by the Secretary of War.

Letters were read:—

From M. Arnollet of Paris, to Mr. Walsh, accompanied by a description of a new machine for maritime defence, invented by M. Arnollet, and offered by him to the French Government. The documents were transmitted by Mr. Walsh to the Secretary of War, and by him referred to the National Institution.

From M. Arago, Perpetual Secretary of the Royal Academy of Sciences, Paris; and from Alexander Smellie, Secretary of the Society of Antiquaries of Edinburgh: Thanking the Institution for the documents sent to those Societies.

From J. K. Tefft, Corresponding Secretary of the Georgia His-

torical Society: Conveying the thanks of the Society for the prompt aid given by the National Institution in the furtherance of the history of Georgia, which, under its auspices, Dr. William Bacon Stevens is now engaged in writing.

The following communication from A. J. Swift, Captain United States Engineer Corps, was read:

WASHINGTON, *June* 24, 1841.

COL. J. G. TOTTEN:

SIR: While in France during the early part of this year my attention was called to the operations of the French, for fixing the moveable sands lying along the sea coast, between the mouth of the Gironde and the Spanish frontier.

The system consists in forming plantations of pines, and on a zone commencing at high water mark, and about two hundred and fifty yards wide, on which the pine will not grow, planting a grass called the gourbet, (*arundo arenaria.*) In planting the pine, among many precautions that are taken for ensuring its growth, is that of sowing with its seed the seeds of other plants of more rapid growth. These for several years serve as protectors to the young pine from storms, &c. The plants best adapted to this purpose are the ajonc, (*ulex europæus,*) used in a zone about seven hundred yards wide, and bounded on one side by the zone in which the gourbet alone grows, and the genet, called in England broom, (*spartium scoparium,*) only used when the distance from the sea is at least nine hundred yards.

As it appeared to me that the system which has been so successfully followed in France might prove useful in our country, I endeavored to procure the information that would be necessary in order to make a commencement here. I have brought over the seeds of all the plants used, and also a tuft of the gourbet and a twig of the pine. A part of the seeds I intend having planted, and, with the intention of depositing the plants, together with the remaining part of the seeds, with the National Institution, I take the liberty of sending them to you by the bearer of this note.

I have the honor to be, sir, your obedient servant,

ALEX. J. SWIFT, *Capt. U. S. Engs.*

Mr. Dayton, from the Committee appointed to report upon the order of business to be adopted at the Conversation Meetings of the Institution, to be held on the first and third Mondays of each month, recommended the following plan.

The chair to be taken and the meeting called to order precisely at seven o'clock, in the spring and summer, and at eight o'clock in the autumn and winter. The chair to be retained so long as the business of the meeting may, in the opinion of the Chairman, render it expedient, but in no case to exceed one hour. At each Conversation Meeting the donations received at the preceding stated meeting to be placed on the table for the inspection of the members, and an oppor-

tunity offered to the donors or other members to make explanations regarding them; oral or written communications to be received, and papers to be read, which have been submitted by the departments of the Institution, or by the Corresponding Secretary; the remainder of the evening to be devoted to conversation upon topics connected with the interests and objects of the Institution.

Stated Meeting, August 9, 1841.

Present, twenty-seven Members.

PETER FORCE, Vice-President, in the Chair.

The following donations were received:

For the Cabinet.

Gold Coin, called Buntagee, coined in the city of Fez, in the year of the Hegira 1251, [A. D. 1835.]—*From J. F. Mullowney.*

Silver Coin of the Emperor Muley Abdallah, coined in Morocco, and named Citsushyee.—*From J. F. Mullowney.*

Collection of Marine Shells.—*From J. G. Bruff.*

Specimens presented by Mr. Bruff:

11 Dentalium,	13 Achatina,	53 Triton,	3 Cymba,
49 Patella,	21 Neritina,	4 Strombus,	18 Cypræa,
34 Bulla,	19 Nerita,	9 Ricinula,	6 Oliva,
2 Helix,	42 Littorina,	3 Terebra,	13 Conus.
4 Melania,	5 Cerithium,	4 Mitre,	

Piece of English Oak, taken in 1831 from the wreck of the English ship-of-war the Augusta, which was sunk on the 23d of October, 1777, in the Delaware river, near Red Bank.—*From Henry S. Crabbe, Philadelphia.*

Scaup Duck, (*Fuligula marila.*)—*From Thomas Tonge.*

Canvass-back Duck, (*Fuligula valisneria.*)—*From Thomas Tonge.*

White Heron, (*Ardea alba.*)—*From Thomas Tonge.*

A Collection consisting of one hundred and seventy Botanical specimens, collected in the State of Ohio; presented by John Bigelow, of Lancaster, Ohio, through the Hon. Mr. Weller, M. C.

For the Library.

Anniversary Address before the Association of American Geologists, April 5, 1841, by Professor Edward Hitchcock, President.—*From Francis Markoe, Jr.*

Tract on the Salices Americanæ, 4to., 1840, by Dr. Joseph Barratt, Middletown, Connecticut.—*From the Author.*

Tract on the Eupatoria verticillata, by the same.—*From the Author.*

Tract on the North American Carices, by the same.—*From the Author.*

Constitution of the Liceo Artistico y Litterario de Madrid.—*From the Liceo Artistico y Litterario.*

Memorial of the "Junta Delegado," 1840.—*From the same.*

Laws of the Society of Netherlands Literature; Leyden, 30th June, 1841.—*From the Society.*

The Acts of the said Society, 1840.—*From the same.*

A Series of Questions, &c.—*From the same.*

Chart of the Adriatic Sea and views of the Coast; 28 folio sheets.—*From G. Moore, U. S. Consul at Trieste.*

Programme des Questions proposés pour le Concours du 1842.—*From the Royal Academy, Brussels.*

Appleton and Company's Catalogue of English Books, for 1841; (New-York.)—*From D. Appleton.*

Journal of the Franklin Institute, for August, 1841.—*From the Franklin Institute.*

Solinus de Memorabilibus Mundi, printed at Spires, in 1512; black letter, small 4to.—*From James H. Causten, Jr.*

De prisca Re Monetaria Norvegiæ, with plates, by Professor C. A. Holmboe, Christiana, Norway, 1840; transmitted by the Hon. Christopher Hughes, Chargé d' Affaires of U. S. to Sweden.—*From the Author.*

The real nature of the Electric Fluid, explained and illustrated by numerous facts, and also a cause assigned for the polarity of the Magnet, by James Glenn.—*From the Author.*

Bibliotheca Americana Nova; 8vo.; London, 1841.—*From O. Rich, the compiler.*

Supplement to the above.—*From O. Rich, the compiler.*

Histoire Philosophique, Politique et Critique du Christianisme, et des Eglises Chretiennes, depuis Jesus jusqu'au dix neuvieme Siecle, par Potter; 8 vols., 8vo.—*From H. Kallussowski, West River, Maryland.*

Reponses du General Devernitski, sur les Remarques sur l'expedition en Russe, 1831, (in the Polish language.)—*From H. Kallussowski, West River, Maryland.*

History of Poland by Lelewel; Brussels, 1837, (in the Polish language.)—*From H. Kallussowski, West River, Maryland.*

Sur les Medailles et Monnaies de Foux, par M. Lelewel, Bruxelles, 1837; (a bibliographical rarity,) in the Polish language.—*From H. Kallussowski, West River, Maryland.*

Laws and Transactions of the Society Diligentia of the Hague.—*From the Society.*

Transactions of the Society of Arts of the State of New-York, vol. 1, 2, 3, and 4.—*From the Albany Institute.*

Transactions of the Albany Institute, vol. 1, and vol. 2 to p. 330.—*From the Albany Institute.*

Fifty-fourth Annual Report of the Regents of the University of the State of New-York, made to the Legislature, March 1, 1841.—*From the Albany Institute.*

Livingston's Essay on Sheep; 8vo.; New-York, 1809.—*From the Albany Institute.*

D. D. Barnard's Discourse on the Life, Character, and Services of Stephen Van Rensselaer, delivered before the Albany Institute, April 15, 1839, (two copies.)—*From the Albany Institute.*

Meteorological Journal kept at the Observatory in Washington, during April, May, and June, 1841, with an account of the Instruments used.—*From Lieut. J. M. Gilliss, U. S. N.*

On motion it was,

Resolved, That the Manuscripts received among the Smithsonian collections, be referred to a Committee, with directions to examine and arrange them. And,

Resolved, That an exact list be made of the other articles forming a part of the Smithsonian bequest.

On motion, it was

Resolved, That the National Institution regards with deep interest the recent formation of the Association of American Geologists, the efforts made, and the plans proposed by it, for the advancement and development of American Geology. And,

Resolved, That the National Institution invite the Association of American Geologists to make the City of Washington the place of one of its annual meetings.

The following report respecting the transfer of the collections of the National Institution, from the basement story to the spacious upper rooms in the new Patent Office, was read.

At a stated meeting of the Institution, held on the 14th of June, the Hon. Mr. Preston stated that, in consequence of a conversation had by him with some gentlemen of the Institution, in which it was represented to him that the collections of Natural History in the basement of the building were exposed to destructive dampness, he had an interview with Mr. Webster, Secretary of State. That, upon his communicating to Mr. Webster the condition of the specimens sent from the Exploring Expedition and the other objects belonging to the Society, Mr. Webster promptly expressed an earnest disposition to give every aid in his power, and offered every facility for the preservation of the interesting collection now in the Patent Office; and to enable him to do so, with a just regard to all the interests concerned, he would immediately request certain gentlemen, of whom the Commissioner of the Patent Office should be one, to examine and report to him the circumstances in which the collection is found, and the accommodations which may be conveniently presented by the building; being entirely disposed to appropriate every vacant space in it to the preservation of those valuable accessions to science, as well as to the public property transmitted by the Exploring Expedition or accumulated by the National Institution.

Mr. Preston said he was happy to be able to assure the Institution that, in this interview, Mr. Webster manifested, as he does on all occasions, that liberal temper in favor of science and learning which so naturally belongs to his own high intellect and extensive acquirements.

The following letter was accordingly addressed to the Committee:

Department of State, *Washington, June 14th*, 1841.

Gentlemen: It is represented to me that the rooms assigned in the Patent Office for the exhibition and preservation of those objects of Science which have arrived and are expected soon to arrive from the Exploring Expedition in the South Seas are not sufficient nor convenient.

As these articles are public property, it is my wish that such other accommodations should be furnished for them as may be practicable, without infringing upon the uses and purposes to which the building is devoted by law.

Will you be so obliging as to visit the rooms, take some survey of the articles, and signify to me what arrangement, in your opinion, may properly be made.

Yours, with respect, DANIEL WEBSTER.

Col. J. J. Abert,
H. L. Ellsworth, Esq.,
Peter Force, Esq.

In compliance with the wish expressed by Mr. Webster in the foregoing letter, the Committee made the examination, and reported fully thereon on the 24th June; and no objection having presented itself, proper arrangements were entered into, in concert with the Superintendent of the Patent Office, and the collections of the National Institution have been transferred to the splendid hall of the new Patent Office.

Whereupon the Secretary of State addressed the following communication to the Committee:

Department of State, *Washington, August 9th*, 1841.

Gentlemen: I have received and read your communication of the 24th of June, respecting the transfer of the collections of the National Institution, and cheerfully approve of the arrangements which you have entered into, with the consent of Mr. Ellsworth, by which the whole collection has been placed in the upper rooms of the Patent Office. So long as this custody of your collection does not interfere with any uses to which the Patent Office is destined by law, it will give me pleasure to allow its continuance.

I congratulate the members of the Institution on its flourishing condition and prospects. They have accomplished much within a very short period. If their efforts be continued with the same zeal and success which have been hitherto displayed, the Institution may be expected soon to enjoy the distinction of having elevated the scientific and literary character of the country.

I beg you, gentlemen, to assure the Society that I feel a real interest in its praiseworthy cause, and will do any thing in my power to promote it.

I am, gentlemen, with regard, your obedient servant,

DANIEL WEBSTER.

Col. Abert, } *Committee, &c.*
Peter Force, }

Letters were read:—

From Dr. G. H. Muller, Secretary of the Society Diligentia of the Hague.

From Professor Renné Jillet, Secretary of the Institution Pœdagogique Central of St. Petersburgh.

From Narciso P. Colomer, Secretary of the Liceo Artistico y Literario, of Madrid.

From W. A. Grahame, Secretary of the Society of Arts, Adelphi, London.

From T. G. La Lau, Secretary of the Society of Netherlands Literature, of Leyden: Conveying the thanks of those Societies for documents sent; transmitting documents in return; and accepting the correspondence of the National Institution.

From Mr. James Banks, of Honduras: Enclosing a copy of a letter from Colonel Galindo, respecting the Ruins of Palenque, in Central America, and four plates representing figures taken from the Ruins.

Stated Meeting, September 13, 1841.

Present, forty-one Members.

PETER FORCE, Vice-President, in the Chair.

The following donations were received:

For the Cabinet.

Hirundo Serripensis.—*From W. M. T. Baird, Carlisle, Pennsylvania.*

Hirundo Riparia.—*From W. M. T. Baird, Carlisle, Pennsylvania.*

Muscicapa Pusilla.—*From W. M. T. Baird, Carlisle, Pennsylvania.*

Fossil Ostreæ, from Potomac Creek.—*From Mr. John H. King.*

One hundred and twenty-one specimens of Birds, from North and South America, East Indies, and the Sandwich Islands; four specimens of Quadrupeds and Reptiles; twenty-two specimens of Shells, Unios, &c., from the American waters; twenty-nine specimens of Shells from the Sandwich Islands, Columbia River, &c.—*From John K. Townsend.*

List of specimens presented to the National Institution, by John K. Townsend:

1	Falco borealis,	*New Caledonia.*	3	Trochilus rubineus,	*Brazil.*
1	Strix nyctea,	*New Caledonia.*	1	" glaucopus,	*Brazil.*
3	Trochilus prasina,	*Brazil.*	1	" amethystinus,	*Brazil.*
1	" cyaneus,	*Brazil.*	3	" sephanoides,	*Chili.*
4	" albicollis,	*Brazil.*	1	" rufus,	*Columbia River.*
2	" squamosus,	*Brazil.*	4	" colubris,	*Washington.*

1 Nectarinia rubra, *Sandwich Islands.*
1 " viridis, *Sandwich Islands.*
1 " flaviventris, *East Indies.*
1 Ramphastos ariel, *Brazil.*
1 Musophaga, *Africa.*
1 Lamprotornis, *East Indies.*
2 Sitta canadensis, *Pennsylvania.*
2 Alcedo punctata, *Buenos Ayres.*
1 Turdus auricularis, *Buenos Ayres.*
1 " nævius, *Columbia River.*
1 " solitarius, *Pennsylvania.*
2 " flaviventris, *East Indies.*
1 " fuscus, *East Indies.*
2 Sylvicola icterocephala, *Wash'ton.*
1 " canadensis, *Washington.*
1 " varia, *Washington.*
1 " coronata, *Washington.*
1 " cærulea, *Pennsylvania.*
1 " parus, *Pennsylvania.*
1 " Blackburniæ, *Pennsyl'a.*
1 " americana, *Pennsylvania.*
2 " virens, *Pennsylvania.*
1 " maculosa, *Pennsylvania.*
1 " æstiva, *Pennsylvania.*
1 " ruficapilla, *Illinois.*
1 " formosa, *Illinois.*
1 " discolor, *New-Jersey.*
1 Muscicapa nigra, *Tahiti.*
1 " acadica, *Pennsylvania.*
1 " tyrannus, *Pennsylvania.*
2 " sulphurea, *Buenos Ayres.*
1 " atra, *Buenos Ayres.*
1 " striata, *Buenos Ayres.*
1 Tyrannus leucurus, *Buenos Ayres.*
1 " variegatus, *Buenos Ayres.*
1 Vireo Bartramii, *Buenos Ayres.*
1 " gilvus, *Washington.*
1 Sturnella ludoviciana, *Cape May, N.J.*
2 Sturnus terrestris, *East Indies.*
1 Quiscalus versicolor, *Pennsylvania.*
1 Icterus baltimore, *Pennsylvania.*
1 " spurius, *Pennsylvania.*
1 Agelaius phœniceus, *New-Jersey.*
2 " purpureus, *Buenos Ayres.*
1 Fringilla iliaca, *Pennsylvania.*
1 " flavescens, *Chili.*
2 Fringilla caudacuta, *Cape May, N.J.*
6 " maritima, *Cape May, N. J.*
1 " cyanea, *Pennsylvania.*
1 " hyemalis, *Pennsylvania.*
1 " cinnamonea, *Sandwich I.*
1 " atricapilla, *Chili.*
1 " ludoviciana, *Pennsylvania.*
1 " erythropththalma, *Penn'a.*
1 " pennsylvanica, *Penn'a.*
1 " canadensis, *Pennsylvania.*
1 " passerina, *Buenos Ayres.*
1 Pyrrhula psittacina, *Sandwich I.*
1 Pyranga cærulea, *Buenos Ayres.*
1 Alauda cornuta, *Washington.*
1 Loxia americana, *Pennsylvania.*
2 " leucoptera, *New Caledonia.*
1 Coccothraustes albiventris, *B. Ayres*
1 Picus erythrocephalus, *Pennsylvania.*
1 " virescens, *Buenos Ayres.*
1 Dendrocolaptes striatus, *B. Ayres.*
1 Psittacus carolinensis, *Illinois.*
1 Columba taitensis, *Tahiti.*
1 " omnicolor, *Australia.*
1 Charadrius Wilsonius, *Buenos Ayres.*
1 " melanogaster, *B. Ayres.*
1 " vociferus, *Cape May, N.J.*
1 Aramus scolopaceus, *Buenos Ayres.*
1 Ardea minor, *Pennsylvania.*
1 Totanus semipalmatus, *C. May, N. J.*
1 Limosa fedoa, *Cape May, N. J.*
1 Tringa alpina, *Buenos Ayres.*
1 Rallus major, *Buenos Ayres.*
1 Parra jacana, *Buenos Ayres.*
1 Pitta albiventris, *Buenos Ayres.*
1 Fulica americana, *Washington.*
1 Gallinago Wilsonii, *Buenos Ayres.*
1 Anas americana, *Washington.*
2 " moschata, *Buenos Ayres.*
2 " latipennis, *Buenos Ayres.*
1 Sterna hirundo, *Cape May, N. J.*
1 " minuta, *Cape May, N. J.*
1 Podiceps auritus, *Buenos Ayres.*
2 Podiceps rubricollis, *Buenos Ayres.*

QUADRUPEDS.

1 Didelphus, *Buenos Ayres.*
2 Sciurus carolinensis, *Washington.*

1 Vespertilio carolinensis, *Penn'a.*
1 Lutra chilensis, *Chili.*
1 Sorex, (new,) *Columbia River.*
1 Sorex Dekayi, *New-Jersey.*
1 Condylura macroura, *New-Jersey.*

REPTILE.

1 Monitor, *Buenos Ayres.*

Five bottles, containing Reptiles, &c.—*From Col. Kearney, U. S. Top. Eng. Corps.*

Jaws of Alligator, &c.—*From the same.*

Lead Ores, from Morristown, Vermont.—*From Hon. A. Young.*

A Knife, said to have belonged to Wacousta, a celebrated Indian Chief.—*From Mr. James Buckler.*

Seven Medallions in Plaster.—*From W. C. Gill.*

An Indian Robe.—*From Mr. Ellsworth.*

One large snowy Heron.—*From Thomas Tonge.*

Two small snowy Herons.—*From Thomas Tonge.*

Tortoise, Porcupine, Monkeys, Shark, &c.—*Deposited by J. Varden.*

Specimens of the Wool of the Alpaca, or Peruvian Sheep, and a Pamphlet on the subject.—*From Rev. R. R. Gurley.*

Fragment of Wood of the first Vessel owned in the City of Baltimore.—*From W. P. Zantzinger, U. S. N.*

Splendid irridescent Coal, from the Mines, Frostburg, Maryland.—*From Mrs. Matthew St. Clair Clarke.*

For the Library.

Reports for 1839, 1840, 1841, of the Royal Institute of British Architects; 4to.—*From the Royal Institute, through its Foreign Secretary, Thomas L. Donaldson.*

The Professional life of Sir John Soane, Architect.—*From the same.*

Plan for the promotion of Art, Science, and Literature, by aid of Government; 1838.—*From the same.*

Catalogue of the Library of the Royal Institute, 1838.—*From the same.*

De la Litterature, et des Hommes de Lettres des Etats Unis d'Amerique, par E. A. Vail, Member of the National Institution; Paris, 1841; 1 vol., 8vo.—*From the Author.*

Journal of the Franklin Institute, September, 1841.—*From the Institute.*

Account of some Parhelia observed at Milford and Camden, Delaware, March 14, 1841, by A. D. Chaloner.—*From the Author.*

Geology of Georgia, part first, by John Ruggles Cotting, State Geologist.—*From the Author.*

Memoir of the late Lewis David Von Schweinitz, with a sketch of his scientific labors; by W. R. Johnson.—*From the Author.*

Address on laying the Corner Stone of the Academy of Natural Sciences of Philadelphia, May 25, 1839; by the same.—*From the Author.*

Description of a specimen of Engraving by the Aboriginal Inhabitants of North America, with a notice of some incidents in the history of the early Settlers of the West Branch of the Susquehanna river; by the same.—*From the Author.*

Eighth Annual Report of the Royal Cornwall Polytechnic Society, 1840.—*From Robert Were Fox.*

Report on some Observations on Subterranean Temperature, by Robert Were Fox; London, 1841.—*From the Author.*

Lean's Engine Reporter and Advertiser, May, 1841.—*From Robert Were Fox.*

Gryll's Annual Mining Sheet, No. 10; from June 1840, to June, 1841.—*From Robert Were Fox.*

Supplément à la collection des Ouvres de J. J. Rousseau, 1741; six vols., 12mo.—*From Francis Markoe, Jr.*

Memoires de l'Academie Royale des Sciences et Belles Lettres de Bruxelles; 8 vols., 4to.; from 1836 to 1840.—*From the Academy Royal.*

Bulletins de l'Academie, &c.; 9 vols., 8vo.; from 1832 to 1840.—*From the Academy Royal.*

Des Moyens de soustraire l'Exploitation des Mines de Houille aux chances d' Explosion; 1840; published by the Royal Academy of Brussels; 1 vol., 8vo.—*From the Academy Royal.*

Annuaire de l'Academie Royal de Bruxelles, for 1839, 1840, 1841; 3 vols., 12mo.—*From the Academy Royal.*

Annales de l' Observatoire de Bruxelles, 1837; 1 vol., 4to.; par A. Quetelet, Astronomer Royal and Perpetual Secretary Academy Royal of Brussels.—*From the Author.*

Catalogue des principales apparitions d'Etoiles Filantes, 1839; 1 vol., 4to.; par A. Quetelet, &c.—*From the Author.*

Seconde Memoire sur le Magnetisme Terrestre en Italie, 1 vol., 4to., par A. Quetelet, &c., 1840, Bruxelles.—*From the Author.*

Tables par le Baron de Stassart, Bruxelles; 1 vol., 12mo; 1837.—*From the Author.*

Flora Tunbridgensis; or Catalogue of Plants growing wild in the neighborhood of Tunbridge Wells; London, 1816; 1 vol., 12mo; by T. F. Foster, &c.—*From the Author.*

Researches about Atmospheric Phenomena; London, 1823; 1 vol., 8vo.; by the same.—*From the Author.*

The Perennial Calendar; London, 1824; 1 vol., 8vo.; by the same.—*From the Author.*

Essay on the origin, symptoms and treatment of Cholera Morbus and other Epidemics, &c.; London, 1831; 8vo.; by the same.—*From the Author.*

Facts and opinions respecting the source of Epidemia, with a historical Catalogue of the numerous visitations of Plague, Pestilence, and Famine, from the earliest period to the present day; London, 1832; by the same.—*From the Author.*

Recueil de ma Vie, mes Ouvrages, et mes Pensées, (opuscule philosophique,) Bruxelles, 1837; 1 vol., 12mo.; by the same.—*From the Author.*

Philozoia; or Moral Reflections on the actual condition of the Animal Kingdom, and on the means of improving the same; with anecdotes and notes; addressed to Lewis Gompertz, Esq., President of the Animal's Friend Society; Brussels, 1839; 1 vol., 8vo.; by the same.—*From the Author.*

Pan, a pastoral of the first age, with other poems; Brussels, 1840; 1 vol., 8vo.; by the same.—*From the Author.*

Letters were read:—

From A. Dallas Bache, President of Girard College, Philadelphia: Acknowledging receipt of a letter conveying a Resolution by which he was requested to furnish an account of an Institution (said to resemble the National Institution) to which Mr Smithson belonged; and expressing a willingness to comply with the request.

From Peter S. Du Ponceau, President of the American Philosophical Society, Philadelphia: Suggesting that the Picture of M. Guizot, painted for the Americans in Paris, and destined for Washington, might be placed in the Hall of the Institution.

From Mr. James Glenn, of New-York State: Transmitting a manuscript on Light, &c., to be laid before the Institution.

From Henry Bauer, New-York: Proposing to the Institution to exchange objects of Natural History, with C. A. Küster, Professor at the Technical Gymnasium, at Erlangen, in Bavaria.

From F. L. Castelnau, New-York: Offering observations in explanation of the so called Shower of Blood, lately witnessed in Tennessee.

From the Hon. Mr. Granger, Postmaster General: Consenting, in reply to a request from the National Institution, to deposit a collection of Plants, lying unclaimed in the dead letter office.

The following communication from Mr. John Pickering, of Boston, to the Corresponding Secretary, was submitted to the meeting.

BOSTON, *September* 1, 1841.

DEAR SIR: I have received your letter, enclosing a copy of the amended constitution of "The National Institution for the Promotion of Science" in the United States, and I will now have the honor to submit some considerations on the subject of that interesting association.

The object of the National Institution, as described in the general terms of the original plan, is "to promote science and the useful arts;" and the subjects intended to be comprised in that general description are arranged under eight departments, or classes, as follows:

1. Astronomy, Geography, and Natural Philosophy.
2. Natural History.
3. Geology and Mineralogy.
4. Chemistry.
5. The Application of Science to the Useful Arts.
6. Agriculture.
7. American History and Antiquities.
8. Literature and the Fine Arts.

All these subjects, I need not say, are entitled to the fostering care of a rich and flourishing people, who are ambitious of sustaining an equal rank with those illustrious nations to whose researches in the same sciences the inhabitants of both continents are so largely indebted for the various arts and comforts of social life which so much distinguish the present age. It is true that the ultimate results of profound investigations in mathematical, or even physical science, are not always so obvious as to command the immediate approbation and encouragement of Govern-

ments or people. But the history of speculations and discoveries ought to convince us that almost every investigation of this description, however unpromising at first, has been attended with some beneficial result to the human family. Every American, therefore, who has the welfare of his country at heart, to say nothing of its reputation abroad, which is, in truth, one of its greatest resources, must have seen with the highest satisfaction the determination of the General Government to extend its patronage, by all the means it can command, to these truly noble objects. Of this liberal spirit the country has had an eminent example in the Exploring Expedition, which was fitted out three years ago, and is still pursuing its honorable career in various quarters of the globe, the known boundaries of which, indeed, it has enlarged by adding the discovery of new and vast regions hitherto unexplored.

The large collections already sent home by this active squadron, and which are now in the process of arrangement at Washington, lay us under no small obligations to the authors of this national enterprise, and to the individuals upon whose talents the nation relies for its complete execution. But, valuable as the fruits of it already are, we may justly anticipate many further useful results from the researches which are to be expected with the return of the Expedition.

In the mean time, it is to be hoped that their collections of Natural History now in our possession will not have lost any of their value by having remained too long in the damp and unsuitable situation in which they were necessarily placed on their first arrival, and where they still were in June last, when I was obligingly permitted to view them with you. This subject, indeed, as you then informed me, had not been overlooked by the distinguished individual at the head of the Department of State, who, as I now find by the late public papers, has readily given the necessary orders to secure the most ample and proper accommodations for this large and valuable public property.

In reviewing the several departments of science allotted to the eight classes above mentioned, I do not find any place expressly appropriated to the *Moral and Political Sciences*, though I must suppose they were intended to be included under some one of those classes. But does not their importance, particularly in this free country, entitle them to a distinct and honorable place among the others? In no department of science could our country furnish a greater number of intelligent and efficient fellow-laborers, nor a greater amount of useful practical results.

It is worthy of remark that, in the first organization of the National Institute of France under the Republic, (which was digested by the most able men of that nation,) a distinct class was established for the moral and political sciences. But under the reign of the Emperor Napoleon, and during the Restoration, that department of the Institute was abolished. The present able and enlightened sovereign of that land of science, however, who sees clearly the true interests of the nation, re-established that class, and restored it to its former rank and importance; and among its first members was one of our own countrymen, the late eminent jurist, Edward Livingston. The class now comprehends, in addition to the illustrious natives of France, many foreigners of the highest distinction. The subjects of its labors are arranged under the heads of: 1. Philosophy; 2. Morals; 3. Legislation, Public Law, and Jurisprudence; 4. Political Economy and Statistics; and 5. General and Philosophical History.

When, therefore, we consider any of the various subjects of investigation which

fall within the boundaries of the department in question, and follow them through the usual subdivisions; as, for example, if, in the above enumeration, we take only *legislation*, in its whole extent, and particularly as applicable to the diversified habits and usages of the different portions of our country; or *jurisprudence*, which embraces what the American jurists have called constitutional law; international law, (all important to us, both as respects our intercourse with foreign powers, and as it affects the relations of each of our States to the others and to the Government of the Union;) the administration of justice through all the States with as much uniformity as practicable, and the harmonizing of the State laws with those of the United States; commercial law, in its widest sense, as relates to our own and other nations; the municipal laws of different foreign nations as compared with our own, or comparative jurisprudence—when we consider, I say, the vast field thus opened to our investigation in only one portion of this single department of knowledge, denominated moral and political science, and justly estimate the importance attached to it in the organization and practice of learned societies in other parts of the civilized world, we cannot but feel a strong conviction that the establishment of a separate class or department for this would be no less useful than the provision made for the mathematical and physical sciences.

In respect to one of the branches I have mentioned, *political science;* I ought perhaps (for fear of being misunderstood) to add, that all the subjects properly falling within that class are, like the subjects of other sciences, to be considered in a strictly philosophical view, and without reference to the temporary feelings, or interests, or motives which, unhappily, too often influence the decisions of the day upon practical questions. The right adjustment of general principles may, indeed, have a salutary control over these disturbing causes, and perhaps lessen their mischievous effects.

I observe, with much satisfaction, that a large number of the intelligent and well educated officers of the Army and the Navy have been found entitled to a place among the members of this scientific association; and you will pardon me, I trust, for adding to the length of this long letter, by mentioning, in this connection, a striking fact, which came to my knowlege at an annual examination of the West Point Military Academy two years ago, and which shows the great services that may be rendered by those officers. A member of the examining committee, who had then recently returned from Europe, stated that he happened to be at the zoological establishment in London, when a large collection of natural and other productions of different countries were opened for inspection, and of the whole number of packages, (seventeen,) no less then *sixteen* had been procured and sent home by British officers on foreign stations. This fact at once demonstrates the value of the services that may be thus rendered by American officers, and the incalculable importance of providing the means of thoroughly educating them, in order that they may know the actual wants of the scientific world from time to time, and may be enabled to apply their services with the greatest effect. The extensive collections which will continue to be deposited in Washington, under the advice or direction of the National Institution, will, it is obvious, be a powerful instrument of accomplishing this object.

The officers of the Army, I may add, will have many advantages in one particular department of our researches, in which the learned of Europe are earnestly looking to us for exact and thorough information, which they consider it incum-

bent on Americans to furnish. I mean American history and antiquities, including particularly all the knowledge which is still attainable respecting the aboriginal inhabitants of this country, as an interesting portion of the great family of man. The investigations to be made in this direction must now be conducted, in a great degree, by the aid of the science of philology; for which comparatively modern science, now cultivated throughout Europe with enthusiasm by the greatest intellects of the old world, the aboriginal languages of America will furnish new and indispensable materials, and in which, I may add, much has been already accomplished, to the honor of the country, by our veteran philologist and associate, M. Du Ponceau.

Such are the interesting objects which have led to the establishment of the National Institution, and which have enlisted in this national cause, as patrons and associates, the President of the United States, the past and present Secretaries of the Executive Departments of the Government, and all those members of Congress whose taste has particularly led them to the cultivation of science and literature.

But I forbear pursuing the train of reflections to which this great subject would naturally lead us. The *national* importance of it to our character abroad, and our welfare at home, cannot fail to ensure for it the constant and liberal patronage of the whole nation, through the present and future Representatives of the people in Congress and in the Executive Departments of the General Government. The bounty of a liberal Englishman may be brought in aid of these great public objects, being the same which he had in view when he made the noble bequest to the general cause of human knowledge in our country; and which, it is to be hoped, will, by the zealous efforts of distinguished individuals in Congress, be soon applied with effect to its destined purposes.

I have thus submitted such considerations as have occurred to me on this important subject during the very short intervals of leisure which I could command amidst the daily avocations of business; and it will give me great satisfaction if any of them should in the slightest degree aid in promoting the great national object in view.

I am, dear sir, your very obedient servant,

JOHN PICKERING.

Whereupon it was, on motion,

Resolved, That a Department of Natural and Political Sciences be added to the other Departments of the Institution.

Mr. F. L. Castelnau, (lately appointed Consul of the United States, for Lima, in Peru,) having offered to deposit in the Institution his Entomological Cabinet, &c., &c., the following correspondence relating to the offer was submitted to the meeting:

WASHINGTON, *July* 22, 1841.

DEAR SIR: At the last stated meeting of the National Institution, Mr. Force, the Vice-President, submitted your letter of the 19th ult., offering to deposit temporarily among our collections your valuable entomological cabinet and books on natural history. A committee was immediately appointed, consisting of Col. Abert, chair-

man, Dr. H. King, and myself, to whom your letter has been referred, with authority to make the necessary arrangements for availing ourselves of your generous offer.

I hasten to convey to you the acknowledgments of the members for this mark of the interest you take in the Institution, and to assure you that, in accepting so valuable a trust, the Institution duly appreciates the liberality manifested by you as one of its members.

I am requested by the chairman to communicate the above facts to you, and to request you to let us know in what manner it will be most agreeable to you that the transfer should be made, and upon what conditions. The expenses of the packing up and transportation of your cabinet and books will, as a matter of course, be defrayed by the Institution.

I sincerely hope that the Institution may, one day, have the means of purchasing your collection, which is understood to be one of the best in France, and will certainly be by far the most extensive and valuable ever seen in the United States.

I am, dear sir, with great regard, your friend and servant,

FRANCIS MARKOE, Jr.,
Corresponding Secretary National Institution.

F. Castelnau, Esq., *New-York.*

—

New-York, *August* 7, 1841.

Dear Sir: On my return to town from a trip in the country, I found your good and kind letter, for which I beg to tender my most sincere thanks. It is with great pleasure that I learn the Society's acceptance of my proposal of depositing my entomological cabinet and books among its collections. That cabinet is generally considered very complete, and I hope it will prove of some interest to those engaged in pursuits of natural history.

The Society's museum, already valuable, will certainly, at an early day, become an object of national pride, and I shall consider myself particularly fortunate if soon so situated as to be able to contribute, by further additions in all branches of natural history, to its progress and prosperity.

The *Garden of Plants* of Paris, the greatest known collection of specimens of natural history, began with means in all regards far below those possessed by our Institution; may the latter, by its rapid growth, soon overtake its elder sister, and prove to the Old World that in sciences, as well as in enterprise, the United States fear no competition.

As to the means of forwarding the collection, I should judge that the most proper would be its deliverance, in Paris, into the hands of the American Consul, who would advise the most expedient way of sending it to this country.

I am, dear sir, with the greatest respect, your friend and obedient servant,

F. CASTELNAU.

Note.—I will also give instructions for my herbarium of European and African plants to be added to the other collections.

Francis Markoe, Jr., Esq.,
Corresponding Secretary of the National Institution.

The following communication from Mr. Brantz Mayer, of Baltimore, appointed, by the Government, Secretary of the United States Legation to Mexico, was read. After discussion upon its contents, it was agreed to refer the letter, for answer, to the Corresponding Secretary; the subject to be resumed at a future period when the Institution might be better prepared to act upon its interesting suggestions and offer.

WASHINGTON, *September* 11, 1841.

FRANCIS MARKOE, JR., ESQ.,
Corresponding Secretary of the National Institution.

MY DEAR SIR: Having recently received from our Government an appointment which will connect me with the embassy to Mexico, and oblige me to reside in that country perhaps for some time, it has struck me that I may be able to render some services to your Institution, by endeavoring to collect objects, either of curiosity or scientific value.

Independently of the natural desire, which, as Americans, we should all possess, to gather the perishing records of the people who have inhabited our continent before the Spanish conquest, there has been a recent stimulant given to our wishes, by the valuable work, which is the result of Mr. Stevens's toilsome travels in Central America and part of Mexico. That distinguished gentleman certainly deserves the highest admiration from his fellow-citizens, for his laborious exertions; but, necessarily pressed for time, and frequently worn down by the climate and harassing journeys, both he and his able auxiliary, Mr. Catherwood, were enabled to do little more than, as it were, remove the dust which had accumulated for ages on a few of the forgotten cities and nations of the South. Our curiosity has been but excited and tantalized, not completely gratified; but the indefatigable travellers have the satisfaction of knowing that they have awakened the interest, not only of the inhabitants of those very countries, to the riches which they scarcely were aware they possessed; but also, that they have created in Europe, and among *us*, a strong desire to obtain, either some of the monuments themselves, or such casts or copies as may be most conveniently transported.

By this means will the history of these neglected cities, over which the forest has been suffered to grow and decay for centuries, be placed within the skilful resources of industrious persons, and we may confidently cherish the hope that American ingenuity, now proverbial throughout the world, will not be withheld from the interpretation of the hieroglyphics with which these antiquities are covered, and that our country will before long contain Champollions as competent to decypher the story of our own continent, as those who have devoted themselves in Europe to the interpretation of Egyptian history.

Your reading has, doubtless, made you familiar with the extent to which European scholars have pushed their inquiries upon this subject, (and with as small beginnings,) and shown you how Sir J. G. Wilkinson in England, the French *savans*, and Rosellini, under the Tuscan commission, have laid open, not only much of the political history of the Egyptian dynasties, but also revealed the arts, manufacto-

ries, amusements, and even the secrets of the private life of that people, for nearly two thousand years before Christ; and all by the study of rude pictures, toilsome researches among tombs, and hieroglyphics on monuments and sarcophagi!

Would it not then be a most laudable employment for Americans to gather and interpret the memorials of their own continent's history; and is it not most fitting that a National Institution like ours, growing up at the seat of Government, should, speedily after its formation, devote itself to the Aborigines who are so rapidly falling before the march of corruption and civilization? As yet, literally, nothing has been done by us; we have been guessing and groping in the dark, whilst *all* the European Governments have been at work with liberal expenditure of money, in this interesting branch of learning, and, having almost exhausted the Old World, are now looking to the New for more triumphs of industry, research and science. Let them not snatch this field from us, to our shame and discomfiture!

Mr. Stevens (if I remember correctly) seems to think that *individual efforts, unaided by our Government*, cannot alone be successful in these inquiries; let us then take up the thread where he was forced by circumstances to drop it, and allow me to assure you of my sincere wish to coöperate with you in your efforts, acting either under your judicious advice, or by the orders of our Government itself should you be so fortunate as to enlist it in your behalf.

I trust the day is not distant, when at least some of the relics of Copan and Palenque, or authentic copies of them, will be found within your walls, and that my countrymen will thus have the opportunity of seeing with their own eyes what Stevens has so graphically described, and Catherwood so beautifully drawn. The Present can make no more gracious bequest to the Future than the memorials of the Past, especially when those memorials embalm the history of a people who perhaps perished, by the inscrutable will of an all-wise Providence, to make room for the advance of a more extended civilization and freedom, which we are permitted to enjoy.

Your most obedient servant and friend, BRANTZ MAYER.

The following communication was read:

Columbian Institute, *July* 17, 1841.

Whereas the charter of the Columbian Institute, for the promotion of arts and sciences, expired on the 20th day of May, 1838; and whereas a new society has been formed by voluntary association, by the name of the National Institution for the Promotion of Science; and whereas the said National Institution has, by a resolution passed on the 12th day of July, 1841, invited the members of the Columbian Institute to become members of the said Institution, and to deposit with it the effects, books and papers of said Institute:

Resolved, That the said invitation be, and the same is hereby accepted.

Resolved, That a copy of this Resolution be communicated to the said Institution.

ASBURY DICKINS,
Secretary of the Columbian Institute.

Stated Meeting, October 11, 1841.

Present, twenty-two Members.

PETER FORCE, Vice-President, in the Chair.

The following donations were received:

For the Cabinet.

Box of Bird Skins.—*From the Hon. Joel R. Poinsett.*

1 Corvus americanus,	1 Querquedula crecca,
2 Quiscalus major,	1 Turdus minor,
1 Quiscalus versicolor,	1 Mergus cucullatus,
1 Rallus elegans,	1 Bombycilla carolinensis,
1 Rallus crepitans,	1 Tringa semipalmata,
1 Totanus melanoleucus,	1 Agelaius phœniceus,
1 Anas sponsa,	1 Fringilla pennsylvanica,
1 Picus pileatus,	1 Fringilla savanna.
1 Cyanocorax cristatus,	

Cabinet of Minerals and of Geological Specimens, (deposited on a former occasion, by Col. Totten.)—*From Col. Totten, Chief U. S. Engineer Corps.*

Engraved Portrait of David Rittenhouse, L. L. D., &c., &c.—*From John F. Webb.*

Map of South-America.—*From Robert B. Fowler.*

Indian Saddle.—*From R. W. Bates.*

Indian Stone Axes, and Arrow heads, &c.; found near Washington.—*From E. Barry.*

Anas americana.—*From J. K. Townsend.*

Picus pileatus.—*From Col. Abert, Chief U. S. Top. Engs.*

For the Library.

Account of Magnetic Observations made at the Observatory of Harvard University, Cambridge, by Joseph Lovering, Hollis Professor of Mathematics and Natural Philosophy, and W. Cranch Bond, Astronomical Observer to the College: Communicated by J. Lovering.—*From the Author.*

Act of Incorporation, Constitution and By-Laws of the Kentucky His-

torical Society, organized March, 1838; Louisville, Kentucky.—*From Edward Jarvis, M. D., Louisville, Kentucky.*

Preamble and Resolutions of the Legislature of Kentucky, in relation to the late decision of the Court of Appeals, on the Replevin and Endorsement Laws; and of the Supreme Court of the United States, on the Occupying Claimant Laws of said State; December 29, 1823.—*From the same.*

Annual Report of the Board of Internal Improvement of the State of Kentucky, 1840.—*From the same.*

Report of R. C. Hewett, Resident Engineer on the Logan, Todd, and Christian Turnpike Road, 1840.—*From the same.*

Annual Report of the Keeper of the Penitentiary; Frankfort, 7th December, 1840.—*From the same.*

Description of the Missourium, &c., &c., by Albert Kock; Louisville, 1841.—*From the same.*

Report of an examination of the Bear Valley Coal District, Dauphin County, Pennsylvania, by Walter R. Johnson; Philadelphia, 1841.—*From the Author.*

Die Grundformen der Infusorien, in den Heilquellen; Nebst Allgemeinen Bernerkungen über die Entwickelung Derselben; von Dr. S. F. Stiebel, (mit einer Tafel;) Frankfurt, am Main, 1841.—*From L. W. Zimmern, Heidelberg Mineralogical Institute.*

Collections of the Georgia Historical Society, vol. 1; 8vo.; Savannah, 1840.—*From J. K. Tefft, Cor. Sec. Georgia Hist. Society.*

Memoir of the Geological Survey of the State of Delaware, &c., &c., by J. C. Booth, 1841.—*From Townsend Ward.*

Series of Periodicals on Education, from 1830 to 1839.—*From L. D. Teackle.*

Bitumen, its Varieties, Properties and Uses, compiled from various sources, by Lieut. H. W. Halleck, U. S. Corps of Engineers, under direction of Col. J. G. Totten, Chief Engineer; Washington, 1841.—*From the Engineer Bureau.*

Catalogue of Collections of Rocks and Fossils, published by the Heidelberg Mineralogical Institution; Heidelberg, 1841.—*From the Heidelberg Mineralogical Institution.*

Catalogue of Collections of Fossils, arranged after the Lethæa Geog-

nostica, by Mr. Bronn; published by the same; Heidelberg, 1841; in German, French, and English.—*From the same.*

Carta di Cabottaggio del Mare Adriatico, designata ed incisa sotto la direzione dell' J. R. Stato Maggiore Generale nell J. R. Instituto Geografico Militare di Milano, 1822 and 1824.—*From George Moore, U. S. Consul, Trieste.*

A printed description of a new genus of Fossils, and a description and analysis of a mass of Meteoric Iron, together with an extract from the letter accompanying them.—*From Dr. Troost.*

Observations in Italian, on the larvæ, growth, and habits of the *Scolia flavifrons*, by Dr. Carlo Passerini.—*From the Author.*

A Treatise on Navigation, in the Russian language.—*From R. B. Fowler.*

Second, Third, Fourth, Fifth, and Sixth Annual Reports of the Managers of the Pennsylvania Institute for the Blind.—*J. H. Causten, Jr.*

The New Testament, in Bengalee; Calcutta, 1837; 8vo.—*From Rev. O. B. Brown.*

Letters were read:—

From the Royal Geographical Society of London. And,

From the Count de Camaldoli, President of the Academy of Sciences, &c., of Naples: Accepting the correspondence of the National Institution.

From Eugene A. Vail, Paris: Transmitting to the Institution a paper containing observations on Music as an element of popular education.

From Franklin Litchfield, U. S. Consul, Puerto Cabello: Presenting to the Institution the works of Col. A. Codazzi, on the Geography and Ancient and Modern History of Venezuela; and an Atlas and General Map of that country, by the same; with remarks and information on the value of these publications.

From the Rev. R. R. Gurley, Washington: On the subject of Catlin's Indian Collections, &c.

From J. J. Bedient, U. S. Despatch Agent, New-York: Stating that he had received and forwarded a box from George Moore, Consul at Trieste, for the Institution.

On motion, it was

Resolved, That a Committee be appointed to wait upon the President of the United States, and to invite him to become the Patron of the National Institution.

Resolved, That the Committee appointed to correspond with the Departments of the Government, be desired to call upon the new Members of the Cabinet for the purpose of obtaining their consent to act as Directors of the National Institution.

Resolved, That the Hon. John Quincy Adams be invited to deliver the next Anniversary Discourse before the National Institution.

Resolved, That a Committee be appointed for the purpose of drafting a Memorial to Congress, praying for a Charter of Incorporation for the National Institution, and to submit the same at the next stated meeting, or at a special meeting of the Institution; to be signed, before presentation, by the Directors and Officers, in behalf of the members of the National Institution.

Resolved, That a list of the officers and men of the Exploring Squadron be made and preserved in the National Institution.

A communication from L. D. Teackle, on Political Economy, Monetary matters, &c., was referred to a Committee.

Stated Meeting, November 8, 1841.

Present, twenty-four Members.

Peter Force, Vice-President, in the Chair.

The following donations were received.

For the Cabinet.

Collection of Plants of Missouri, with a descriptive letter.—*From George Engelmann, M. D.*

Living Owl, (*Strix virginiana.*)—*From Jonathan P. Felt, Spottsylvania County, Virginia.*

Capsule of Cream-Nut Tree, with Nuts.—*From the same.*

Box of Shells.—*From Benjamin C. Burt, Warwick, Orange County, New-York.*

Fancy Box of Whalebone.—*From the same.*

Whalebone ornamented.—*From the same.*

One Five Pound Note, 1759, Pennsylvania.—*From the same.*

One Dollar Note, 1775, Maryland.—*From the same.*

One Unio, and several Geological Specimens.—*From John R. Woods.*

Coins.—*From Dr. Hanson Penn.*

Minerals.—*From Joseph Fussell, Pennsylvania.*

Model of the Holy Sepulchre, Jerusalem.—*From Selby Parker, Washington.*

Four Specimens of Limulus polyphemus, (Horse-shoe Crab.)—*From W. G. Cranch.*

Great Heron, (*Ardea herodias.*)—*From Philip Stone.*

Fossils, (*Pectens,*) from James River, Virginia.—*From Wm. Knowles, Georgetown, D. C.*

For the Library.

Observations on the tails of Halley's Comet, &c.—*From James Glenn.*

Proceedings of the American Philosophical Society of Philadelphia, vol. 1, No. 14.; vol. 2, Nos. 17, 18, and 19.—*From the Society.*

Proceedings of the Academy of Natural Sciences of Philadelphia, vol. 1, Nos. 1, 2, 3, 4, 5, 6, and 7.—*From the Academy.*

Catalogues of Instruments. Makers: Wrightman, Boston; Jones, London; Pixü, Paris.—*From Rev. J. Carly, Georgetown College.*

Almanac, 1790.—*From John S. Sayres, Alexandria, D. C.*

The following communication was read:

St. Louis, *October* 21, 1841.

Dear Sir: Allow me to present through you to the National Institute, of which I have the honor to be a corresponding member, a small collection of plants which I have made in this vicinity during the past season. I confine myself, for the present, to two genera; but I believe that you get them from me more complete than any one else has them.

The genus *Cuscuta*, which has attracted my attention since several years, has

been carefully examined by me this season, and I have found, in the neighborhood of St. Louis, four distinct species and a distinct genus, only one species being known so far, according to my knowledge and the books which I could compare. I send you specimens of all the species. An essay on this interesting genus I intend to publish in Silliman's Journal, with figures.

The genus *Verbena* I have had occasion to examine from another cause. The species are well known, but many intermediate forms have puzzled me for several years, till, by closer investigation, these intermediate plants proved to be hybrids; and no genus of American plants, I believe, is richer in hybrids than *Verbena*. We have seven species, as described in botanical works here. One of them, *Verbena aubletia*, is very distinct from the others, and enters into no connection with them; another, *Verbena hastata*, I cannot but consider a variety of *Verbena paniculata;* so that five species remain, which produce hybrids with one another: *Verbena bracteosa*, *urticifolia*, *paniculata*, *stricta*, and *angustifolia;* and already I have discovered five, or rather seven, hybrids between them.

You will ask, why are they *hybrids?* Why not varieties of other species, or genuine species themselves?

Because they are rare, never common, and only grow where the parent species are common; because they are in all respects intermediate between the parent species; and, principally, because they do not produce ripe seed, or produce it only in extremely small quantities, and therefore hardly ever propagate.

My hybrids are: 1. Verbena, bracteoso-urticifolia; 2. urticifolio-bracteosa; 3. paniculato-urticifolia; 4. stricto-urticifolia; 5. urticifolio-stricta; 6. stricto-paniculata; 7. stricto-angustifolia.

I can send you to-day only 2, 3, 4, 5, 6, and 7, together with the parent species. Next season I intend to pay more attention to this interesting anomaly, and propose to keep you apprized of my discoveries. Would that other botanists might pay some attention to this singular freak of nature. I have no doubt that some plants, which are now considered genuine species, will prove hybrids in other genera also. Very respectfully, yours, &c.

GEORGE ENGELMANN.

H. King, M. D., *Curator of the National Institution.*

Stated Meeting, December 13, 1841.

Present, one hundred and three Members.

Peter Force, Vice-President, in the Chair.

Mr. Force, the Vice-President, from the Committee appointed to wait on the President of the United States, announced that, in compliance with the wish of the members, the President of the United

States, as will appear by the following letter, had cheerfully consented to become the Patron of the National Institution :

WASHINGTON, *December* 13, 1841.

SIR: I have to regret that public engagements deprive me of the satisfaction of being present at the contemplated meeting of the National Institution for the Promotion of Science.

I cannot fail, however, to communicate to you the assurance of the deep interest which I take in the objects of the Institution, my best wishes for its complete success, and my congratulations upon those achievements which have already crowned its undertakings, and which furnish at once an evidence of its present enterprise and progress, and a high promise of eminent future triumph and usefulness.

I salute you and your associates of the Institution with sentiments of high respect and consideration. JOHN TYLER.

To the VICE-PRESIDENT *of the National Institution, Washington.*

The following donations were received:

For the Cabinet.

Description of the Four Hundredth Anniversary of the Invention of Printing, (German.)—*From Dr. Flugel, Corresponding Member National Institution, Consul of the U. S. at Leipzig, by the hands of Hon. J. Q. Adams.*

Print emblematic of the same.—*From the same.*

Specimens of Artificial Birds.—*From the same.*

Horns of a Moose, (*Cervus alces,*) killed near the head of the North West Branch of the Penobscot river, on the "disputed territory."—*From Randolph Coyle.*

Fish, and Crustacea, (*Astacus* cœcus,*) from the Mammoth Cave, Kentucky.—*From Mrs. Col. Croghan.*

Crystals, Stalactites, &c., from the Mammoth Cave, Kentucky.—*From Mrs. Col. Croghan.*

Copy of an ancient Egyptian Monumental Slab (original in Naval Lyceum, New-York) on lithographic paper, done by a new and simple process, by Lieut. Harwood.—*From Lieut. Andrew Allen Harwood, U. S. N.*

Front view of Whitehall, near Newport, Rhode-Island, formerly the residence of Dean Berkely; and view of Hanging Rock, and Sachuest Beach and Purgatory, near Newport, (the rock under which Dean Berkely wrote his "Minute Philosopher,") drawn and lithographed by Lieut. Harwood.—*From the same.*

Four Medals, electrotyped by the same.—*From the same.*

Three Cat Squirrels, (*Sciurus cinereus.*)—*From Theodoric B. Skinner.*

Gray Squirrel, (*Sciurus carolinensis,*) from Somerset County, Eastern Shore Maryland.—*From Theodoric B. Skinner.*

Perna Maxillata imbedded in blue clay, from the estate of George Wilkinson, near Huntingdon, Calvert County, Maryland.—*From Mr. Wilkinson.*

Fossils from the Calvert Cliffs.—*From Dr. James Tongue, Calvert County, Maryland.*

Fossils from the Patuxent.—*From Dr. G. Granger Tongue, Calvert County, Maryland.*

Crystalized Selenite, from the estate of Dr. Robert Neale, below the mouth of the Patuxent, St. Mary's County, Chesapeake Bay.—*From Dr. Neale.*

Selenite and Fossils, from St. Mary's river, Maryland.—*From Dr. James W. Roach.*

Panopea Americana, &c., from the Patuxent.—*From Chapman Billingsly, St. Mary's County, Maryland.*

Shells, &c.—*From Mrs. Dr. J. Mitchell, of Sidney, New South Wales.*

Catalogue of Shells, &c., presented by Mrs. Mitchell.

1 Galeolaria, group on sand stone.	2 Ostrea,	3 Nerita,	5 Triton,
	3 Terebratula,	2 Partula,	1 Cassis,
2 Corunulæ,	2 Crepidula,	2 Stomatella,	4 Purpura,
3 Balanus,	9 Ancylus,	4 Haliotis,	12 Buccinum,
2 Cleidothœrus,	12 Chiton,	1 Solarium,	2 Nassa,
4 Venerirupis,	1 Chitonellus,	6 Trocus,	2 Mitra,
1 Tellina,	4 Patella,	3 Littorina,	1 Voluta,
3 Cytherea,	2 Bulla,	2 Phasianella,	1 Cymba,
6 Venus,	19 Helix,	2 Turbo,	48 Cyprœa,
3 Arca,	1 Cyclostoma,	5 Cerithium,	16 Oliva,
5 Cyclas,	2 Vitrina,	3 Turbinellus,	7 Conus.
4 Chama,	10 Limnœa,	7 Strombus,	
8 Geological specimens from Carboniferous formation.		5 Papers of Seed.	
		1 Box of Insects.	
2 Mineralogical specimens.		1 Large section of Fossil Wood.	

Anadonta, found near the President's House, on the Potomac.—*From H. C. Williams.*

Two hundred plants of the District of Columbia, collected and preserved by H. C. Williams.—*From H. C. Williams.*

Hercules Beetle, (*Scarabæus hercules,*) from the Island of Antigua, West Indies.—*From Francis Markoe, Jr.*

Frog, (*Rana,*) from Island of Antigua, West Indies.—*From Francis Markoe, Jr.*

Exogyra Costata, Arneystown, New-Jersey.—*From T. A. Conrad.*

Sulphuret of Iron, and Lignite, Rariton Bay.—*From Lieut. George M. Bache, U. S. N.*

Specimens of Embroidery of Glass on Silk, in imitation of gold and silver embroidery; a new fabric, manufactured in Paris.—*From Capt. George W. Hughes, U. S. Top. Engs.*

Skull of John Hicks, a noted Seminole Chief.—*From Dr. James C. Hall.*

Hydrocephalic Skull, (auricular bones preserved.)—*From Dr. James C. Hall.*

Blue Wheat, (*Tritïcum,*) (in ears,) from Andalusia, Spain.—*From A. Vail, Chargé d'Affaires U. S. Madrid.*

Four Medals. No. 1. Struck by the Royal Society of Sciences, Letters and Arts of Antwerp, on the occasion of the bis-secular fêtes in honor of Rubens. No. 2. Of the National Exhibition of Fine Arts, in 1839, intended as a national reward. No. 3. Commemorative of the opening of the First Section of the Belgian Rail Roads in 1834. No. 4. Struck in honor of the Regent of Belgium.—*From Mons. Charles Serruys, Belgian Minister, in the name of the Belgian Government.*

Bird of Paradise, (*Paradisea apoda.*)—*From Miss Virginia Forsyth.*

Siamese Book, (a novel.)—*From Miss Virginia Forsyth.*

Crystals from the Slate Rocks of Connecticut Valley, at Charlestown, New-Hampshire.—*From S. Webber, M. D.*

Magnetic Oxides of Iron, chiefly from Essex, Franklin, and Clinton Counties, New-York.—*From B. S. Roberts, Civil Engineer.*

Large native War Canoe, Sandwich Islands; given to Com. Chauncey, by Capt. Bolton, U. S. N.—*From the family of the late Com. Chauncey.*

Antique Roman Vase, from Pompeii.—*From Capt. John S. Chauncey, U. S. N.*

War Clubs, Lances, Spears, &c., from the Sandwich Islands.—*From Capt. John S. Chauncey, U. S. N.*

For the Library.

Henrici Mori, Cantabriensis, opera omnia; folio; London; 1679.—*From Matthew St. Clair Clarke.*

In Librum Judicum D. Petri Martyris, Commentarii doctissimi, &c., &c.; folio; 1571; Tiguri.—*From the same.*

S. Thomæ Aquinatis, in quatuor libros, Aristotelis, de Cælo et Mundo, Commentaria, &c.; Venetiis; folio; 1575.—*From the same.*

Camden's Britannia; London; folio; 1695.—*From the same.*

Biblia, Interprete Sebastiano Castalione, Basileæ; folio; 1551.—*From the same.*

Johannis Calvini, Magni Theologi, Institutionum Christianæ Religionis, Libri quatuor, Lugduni Batavorum; folio; 1654.—*From the same.*

Johannis Caspari Sueceri, Thesaurus Ecclesiasticus e Patribus Græcis, &c., &c., Amsteldami; folio; 1728.—*From the same.*

Transactions of the Historical and Philosophical Society of Ohio; vol. 1, part 2, 1839.—*From J. Burnett, Cincinnati.*

Map of Nova Scotia.—*From F. Alger, Boston.*

Meterological Journal, September, October, November, 1841.—*From the author, Lieut. James M. Gilliss, U. S. N.*

Mean declination of the Magnetic Needle, together with the height of the Barometer and Thermometer for each of the magnetic hours during the months of July, August, September, October, November, and December, 1840, as observed at Washington City.—*From the author, Lieut. James M. Gilliss, U. S. N.*

Berliner Gewerbe, Industrie und Handelsblatt; Berlin, 1841. Nos. 1, 3, 4, 5, 6, & 7.—*From Henry Wheaton, American Minister to Prussia.*

Difficulties of Medical Science; an Inaugural Lecture, by R. Bird, M. D., Professor Medical College, Pennsylvania.—*From the Author.*

American Bacillaria, part 1.; Desmidiaceæ; by J. W. Bailey, Professor Chemistry U. S. Military Academy, West Point.—*From the Author.*

Essay on the means and importance of introducing the elements of Geometry into the general plan of popular education, with an Address to the President of the United States, and to the people of the District of Columbia, by D. McCurdy, of Fairhead.—*From the Author.*

Species et iconographie generique des Animaux Articulés, premiere partie, insectes coleopteres; par M. F. E. Guerin Meneville; prospectus.—*From the Publisher.*

Lettre sur le Rhopalodon, genre de saurien fossile, du versant occidental de l'oural, par G. Fischer de Waldheim, &c.; Moscow, 1841.—*From the Author.*

United States Literary Advertiser and Publisher's Circular, New-York, November, 1841, by J. & H. G. Langley.—*From the Publishers.*

Journal of the Franklin Institute, October, 1841.—*From the Institute.*

Description of an entire head and various other bones of the Mastodon, by W. E. Horner, M. D., and J. Hays, M. D.; 4to.; with plates; Philadelphia.—*From the Authors.*

Untersuchungen über die Sprache, &c.; von Alexandre Schischkow, Admiral, &c.; translated by the Chevalier Göetz, St. Petersburgh, 1826; 3 vols., 8vo.—*From the Am. Phil. Society, Philadelphia, in the name of the Academy of Sciences of St. Petersburgh.*

An English Grammar, by D'Arcy A. French, 1831.—*From the Author.*

Hon. Judge Cranch, from the committee to draft a memorial to Congress, praying for a Charter of Incorporation, submitted the same, which was adopted, and referred to the committee, with directions to obtain the signatures of the Officers and Directors of the National Institution, and to present it to Congress.

Col. Totten, from the Department of Natural History, reported that the sum appropriated for the purchase of certain books was insufficient. Whereupon the amount needed was voted.

The Department of Natural History reported upon a communication from Mr. Norman, that inasmuch as the tree (bois d'arc, or Ossage apple) referred to in it has been lately sufficiently described by Mr. Nuttall, and others, it deems it unnecessary to institute further inquiry into its history, &c.

The Corresponding Secretary reported the following Letters and Communications:—

From Mr. Vail, Chargé d'Affaires, Madrid:

MADRID, *August* 12, 1841.

MY DEAR SIR: Confined as I am by my public duties to the city of Madrid, a point not very fertile in objects interesting to the arts and sciences, and, withal, sufficiently occupied by subjects of more immediate concern, I have but little leisure to listen to my desire of contributing my mite to the labors of the National Institution. Seeing, however, that agriculture is one of the branches of industry which the Institution is endeavoring to promote, I cannot resist the temptation of presenting to it a few ears, herewith transmitted for that purpose, of a curious looking kind of wheat, which I picked up in a late excursion into Andalusia, and which I have nowhere else seen or ever heard of. You must not take its dark bluish color for the effect of accident. I saw many very extensive fields of that color, which, with the unusually long and heavy beard, gave to the abundant crops the appearance of beautiful blue fur. I am not able to assure you that the grain itself possesses any marked advantage over other kinds; indeed, I was told that richer and better is raised in this country. But you will perceive that the kernel is large, though it might not have acquired its full development when I gathered it standing in the first days of June. I was induced to take a specimen of it more on account of the place where it grew than from any other cause. That place was no other than the vast arena of the magnificent Roman amphitheatre of the ancient and sumptuous city of ITALICA, the birth-place of the Emperors Trajan, Hadrian, and Theodosius, and of the Roman poet, Silius Italicus. Founded by Scipio Africanus, Italica became the capital of the rich and fertile Province of Bœtica, now Andalusia, and, judging from what is left of it, must have been, indeed, a fit place to cradle such mighty spirits. It stood on the right bank of the Guadalquiver, one league above the present site of the city of Seville, with which it is connected by a fine Roman road, still used, and in good preservation. The lazy, indolent Andalusian, is content to sow and reap his corn on the now level and deserted soil, and allows a few feet of earth to hide numberless remains of magnificent works of art. The eighty thousand marble columns which sustain the private dwellings, even the humblest in Seville, were dug out of the ruins of Italica; and numberless fragments of statuary, of the most exquisite workmanship, may be seen in the possession of private individuals, and in some public establishments, while others are left to moulder on the surface of the earth, and beautiful mosaic pavements suffered to be washed away with the common soil. It is strange that nothing certain is known of the fate of Italica, and we might be utterly ignorant of the cause of the destruction of that splendid city, did not the fragments of statuary, and other productions of art, found

amid its ruins, afford conclusive evidence that it was laid prostrate by some great convulsion of nature. The amphitheatre, in whose immense elliptical arena, near three hundred feet in diameter, now grow luxuriant crops of blue wheat, is but a heap of huge masses of masonry, broken and lifted from their places by superhuman agency; no part of the structure having withstood the shock, except the deepest foundations, in which are still seen, leading by arched ways into the arena, the vaulted chambers in which the wild beasts were wont to be prepared for the cruel sport. A segment of the circumference, however, still exhibits six or eight rows of benches, in a good state of preservation, which serve to trace the outline of the building. Whether enriched by the blood of the contending gladiators and their ferocious competitors for applause, or by a small stream which now runs through the arena, the soil produces the heaviest crops I have seen in Spain. The crimson flowers growing among the wheat present to the mind an image of the gore with which the place was so often stained. The stream, at intervals, yet rolls up some copper *oboli*, which the traveller may get, for a few maravedis, from the unbreeched urchins who haunt the spot. I would have spent many hours there, and even with my own hands have dug into the soil for valuable relics, but the land is in the possession of speculators, who will neither explore it themselves, nor allow any one else to do it. And thus this rich treasure for the antiquarian, and deep mine of historical lore, is now a sealed book, and will remain so for the many years to come, which, I fear, this unhappy though beautiful country is destined to pass in its present unfortunate condition.

With esteem, I am, dear Sir, yours truly, A. VAIL.

From George Moore, U. S. Consul, Trieste.—*Extract.*

TRIESTE, *October* 7, 1841.

It may appear rather apocryphal that, in the year 1841, a river should have been discovered in the immediate neighborhood of Trieste, and but a very short distance from the highway to Vienna; yet such is the fact.

At about nine miles in a direct line to the east of Trieste, the small river "Recca" enters and disappears in the Grotto of St. Cautien. At about eleven miles in a direct line to the northwest of Trieste, and precisely where the Highlands terminate, the river "Timavo" gushes out from the rocks, is navigable almost to its source, and, at the distance of about a quarter of a mile, enters the sea.

To convey a more correct idea of this interesting discovery, I have sent you, by the American barque Falmouth, John Davis, Jun., master, a tin case, addressed to the care of Mr. Bedient, United States Despatch Agent at New-York, containing two lithographic views and plans connected with this river, which, at the spot where it has been discovered, about two and a half miles east-northeast of Trieste, is about nine hundred feet beneath the surface of the earth, and is a much larger body of water than the "Recca," though there is no doubt but that it forms part of the newly discovered river.

As Trieste suffers frequently from drought, it is to be hoped some plan will be devised to conduct at least a part of this water to Trieste. A tunnel is talked of.

I am, respectfully, sir, &c.

GEORGE MOORE, *Consul.*

From M. Serruys, Chargé d'Affaires of Belgium.

BELGIAN LEGATION, WASHINGTON, *December* 8, 1841.

DEAR SIR: In addition to the Antique Roman Lamp, which you had the kindness to accept in my name for the National Institution, I hope you will allow me to offer you now—

1st. A Medal struck by the Royal Society of Science, Letters and Arts of Antwerp, on the occasion of the bis-secular fêtes in honor of RUBENS.

2d. A Medal of the National Exhibition of Fine Arts in 1839, intended as a national reward.

3d. A Medal commemorating the opening of the first section of the Belgian Rail-Road, in 1834.

4th. A Medal struck in honor of the Regent of Belgium.

These Medals are presented by me, in the name of the Belgian Government, as a proof of the warm interest in the establishment and prosperity of the National Institution for the Promotion of Science, founded at the seat of Government, which is destined, I believe, to shed lustre on the United States.

Very respectfully, &c., CHARLES SERRUYS.

From Lieutenant Harwood, U. S. Navy.—(*Extract.*)

U. S. NAVY-YARD, NEW-YORK, *November* 16, 1841.

MY DEAR SIR: Several months ago, I collected sundry trifles wherewithal to show my desire to serve the National Institution. * * * * * * But I beg to remind you that they are not forwarded so much for their novelty or intrinsic value as to point out a way in which the officers, particularly of the Mediterranean Squadron, may render very essential service to the Institution, the interests of which I feel assured they will all take a pride in advancing.

By means of that simple apparatus the Electerotype, perfect fac-similes of the choicest medals, both ancient and modern, may be collected; and if the apparatus of Daguerre could be placed on board one of the ships, perfectly accurate views of the most interesting sites and monuments of classic history be obtained. The "*modus operandi*," in both cases, being well understood, I need not here refer to it; but I must be allowed to lay before you a more humble, yet hardly less complete method, of copying and preserving ancient inscriptions, a specimen of which you have in the copy of an ancient Egyptian monumental slab, in the collection of the Naval Lyceum at this place. The whole apparatus consists of a sheet of unsized paper, such as is used by lithographers, a hat brush, and a little water. The paper is wetted, laid upon the stone, and beaten into the *intaglio* of the monument, and, when dry, will preserve perfectly the form of the inscription and figures. This method is not only shorter but much more effective than any other, as it shows every thing of the proper form and size; and had it been applied to the hieroglyphics on the Dighton Rock, would have saved the learned antiquaries of Copenhagen a world of trouble, arising from the misconception or imagination of the draughtsman, who very often gives a finish to forms, which, like those we fancy in the sky, require some assistance in the making out. I have passed whole fields strewed with inscriptions in the course of my travels in the East, and, on a second visit, looked in vain for some of the most remarkable. A hat brush and a little water would have preserved the

little history they contained. I therefore hope you will think this homely apparatus worthy of your attention.

I hope when the duplicate specimens of the objects of natural history, sent home by the Exploring Expedition, are distributed, the Naval Lyceum will not be forgotten. Those who take the deepest interest in its prosperity, are likely to be foremost in advancing that of the National Institution; and a little encouragement from the parent establishment would, I think, be amply repaid.

Very truly yours, ANDREW A. HARWOOD.

From the Hon. Joseph R. Ingersoll, Member of Congress, Philadelphia.

WASHINGTON, *December* 13, 1841.

SIR: The present condition of the "National Institution" affords a cheering promise of extensive usefulness and assured success. It is already advancing rapidly towards eminence. In particular departments of science, and in science generally, it can scarcely fail to produce the happiest results. The talents and energy it has concentrated upon topics of that character must give it inestimable value. There is, however, a sphere in which national results no less important may be produced by its exertions, and yet the attention of its members has not, perhaps, been actively devoted to it. I allude to the department of *Taste* and the *Fine Arts*. At the same time that science is effectually promoted, it is confidently believed that principles may be cultivated and diffused which will refine, liberalize, and give grace to public sentiment, and make our country no longer dependent upon the schools of foreign nations for the instruction of her gifted sons in the elements of those elegant accomplishments, in which, when their tastes are cultivated, they are so able to excel. This desirable object can be effected only by rendering familiar to them, at home, the most finished works of art; the genuine performances of masters whom the world has united in reverencing as models of study and imitation, whose productions constitute in themselves indispensable lessons in their creative mystery.

The Count Survilliers has recently become possessed, by the munificent bequest of the late Cardinal Fesch, of what is supposed to be the most valuable private collection of paintings in the world. It is a gallery consisting of works of the great masters, unquestionable as to genuineness and originality, and of the highest order of merit, beauty, and attractiveness. If, by any effort, this Institution could obtain such a treasure, it would be difficult to estimate the national benefits that it might produce. The hope thus suggested may possibly be altogether visionary; but to give reality to it would be a signal and glorious victory.

Presuming, in some measure, upon the existence of friendly feelings on the part of the present distinguished proprietor towards the country in which he has long resided, and made many attached friends, you may not think it unreasonable to impute to him a disposition to listen to overtures in behalf of the National Institution. Mere pecuniary equivalent it could not, of course, promise or command. But if it could become endowed, either with a particular view to this splendid possession, or by a general grant of a tract of the public domain, what happier destination could the endowment receive than to the brilliant purchase I have named?

All of these notions are perhaps delusive. Of the consistency of them with the

general purposes of the Institution, you can judge much better than myself. If the arrangement be in harmony with its fundamental plan, and the means of accomplishing it can justly be attained, there can be little doubt of the lasting benefits that might ensue. An appointment of a committee, specially charged with the subject, or a reference of it to the officers of the Institution, would lead to indispensable preliminaries. Should these be happily attended by no insuperable obstacles, further movements would be the work of further time.

I am, with great regard and respect, your obedient servant,

JOSEPH R. INGERSOLL.

From H. C. Williams, late a resident member: Stating his wish that his name should be taken from the list of resident, and enrolled among the paying corresponding members, he being about to remove to Sevier County, Arkansas; where he hopes to be able to collect valuable specimens of natural history for the National Institution.

From J. L. Smith, Washington: Submitting a plan of a Government Department of Agriculture and Education.

From H. Kallusowski, Richmond, Virginia: Suggesting to the Institution to commence a general plan for exchanging Historical works and documents relating to North and South America, since their discovery and colonization, for similar European works and documents since the invention of printing.

From Dr. E. Foreman, Baltimore: Proposing a plan of exchanges between the Institution and the Conchologists of the United States.

From Hon. J. R. Poinsett, President of the National Institution: Mentioning that Dr. Robert W. Gibbs, of Columbia, South-Carolina, had presented to the Institution a very valuable old Painting, by Spagnoletto.

From D'Arcy A. French, Washington: Submitting a communication on Grammar.

From A. H. Palmer, New-York: Proposing exchange of Transactions between the National Institution and the Real Sociedad Economico de Filipinos, of Manilla.

From Dr. S. Webber, of Charlestown, N. H., communicating a paper, on the great geological features of the valley of Connecticut river, at Charlestown; and remarks on some crystals found in the slate rock scattered in that region, with specimens.

From Dr. Dunglison, Secretary of the American Philosophical Society of Philadelphia.

From the Chev. de Bacourt, Minister from France.

From Robert Walsh, Paris.

From Edward Harris, Moorestown, New-Jersey.

From B. S. Roberts, Plattsburgh, New-York.

From Ethan Campbell, New-York.

From Robert S. Chew, Washington.

From P. S. Du Ponceau, President American Phil. Society.

From Hon. W. D. Merrick, United States Senate.

From J. Coppinger, New-York.

From J. W. Williams, U. S. Consul, Sidney, New South Wales.

From J. Burnett, Cincinnati, Ohio.

From Dr. James C. Hall, Washington.

The following letters from the Secretaries of War and of the Navy, accepting directorship of the National Institution, were read:

WAR DEPARTMENT, *December* 4, 1841.

GENTLEMEN: I received last evening your communication of the 1st inst., desiring to know whether I will consent to serve as a director of the National Institution, according to the provision of its constitution which makes the heads of Departments directors, with their consent. In reply, I have to say, that I not only cheerfully consent to serve, but that every aid in my power, personally or officially, shall be rendered to promote the noble and national purposes of the Institution, so far as may be consistent with the higher obligation to devote all the time necessary to the discharge of my public duties. That obligation, I fear, will leave me but little, if any leisure for the agreeable associations and meritorious labors of your society.

With great respect, your obedient servant,

JOHN C. SPENCER.

COL. J. J. ABERT,
A. O. DAYTON, Esq.
FRANCIS MARKOE, Jun., Esq. } *Committee, &c.*

NAVY DEPARTMENT, WASHINGTON, *December* 3, 1841.

GENTLEMEN: I have the honor to acknowledge the receipt of your letter of the first of this month, informing me, that by the constitution of the National Institution for the Promotion of Science, I am, as the head of one of the Departments of Government, a director of that Institution, provided I will consent to serve; and expressing your own wish that I would take upon myself that office. I accept it with very great pleasure, but at the same time, with very great doubt of my ability

to render any essential service. I am sure that I shall render none which will be in any degree commensurate with the interest which I feel in the success of the Institution.

Very respectfully, &c.,

A. P. UPSHUR.

J. J. ABERT,
A. O. DAYTON,
FRANCIS MARKOE, Jun. } *Committee, &c.*

The following Resolutions were offered and adopted:

Resolved, That Mr. Smith's communication be referred to the Department of Agriculture.

Resolved, That that the subject of Mr. Kallussowski's letter be referred to a committee with directions to report upon it.

Resolved, That Mr. French's paper on the English verb be referred to a committee with directions to report upon it.

Resolved, That the thanks of the National Institution be presented to the Belgian Government, through its representative, for the National Medals.

Resolved, That a committee be appointed to examine the subject of exchanges, to propose a plan for the purpose, and to report fully thereon to the Institution for its further consideration and action.

On motion of Capt. George W. Hughes, it was

Resolved, That the Department of Geology and Mineralogy, requested on a former occasion to prepare a geological survey of the District of Columbia, be instructed to memorialize Congress, at its present session, to grant a sufficient sum of money to defray the expense of a careful and minute trigonometrical and geological Survey of the District, to be made under the direction of the National Institution.

On motion of John S. Skinner, it was

Resolved, That a committee be appointed to confer with the gentlemen who may be in attendance at Washington, under a public notice, for the formation of a National Agricultural Society, and explain to them that a Department of Agriculture already exists in the Institution, and to suggest that all their objects might probably be sooner and better accomplished by uniting with the National Institution, these objects being believed to be identical.

Mr. Markoe stated, that during a portion of the months of October and November, he accompanied Mr. T. A. Conrad, Palæontologist of the New-York Survey, on a geological excursion, for the purpose of examining the medial tertiary (of Conrad, being the equivalent of Lyell's older pleiocene) formations of the counties of Calvert and St. Mary's, Maryland, during which they had collected a large number of fine fossils, embracing many new species. Among others Mr. Markoe obtained from the Calvert cliffs a large fossil head, (*Delphinus*,) to which he proposed to give the name D. Calvertensis.

Mr. Markoe further stated, that Mr. Conrad was preparing a report upon the subject, to the National Institution, which would be published in the forthcoming Bulletin of its proceedings, accompanied by plates figuring some of the new fossils, and the head, of which a description would be given.

Mr. Markoe submitted the following list of some of the fossils obtained by him on the occasion, many of which are new, which he presented to the National Institution:

Mactra ponderosa,	Tellina biplicata,	Turritella alticostata,
Fusus quadricostatus,	Tellina, (new,)	Terebra simplex,
Perna maxillata,	Lucina Foremani, (new,)	Coral, (new,)
Pecten Madisonius,	Lucina anadonta,	Coral, (new,)
Crassatella Marylandica,	Natica heros,	Buccinum quadratum,
Crassatella melina,	Natica duplicata,	Buccinum lunatum,
Panopea americana,	Venus alveata,	Buccinum trivittatum,
Panopea reflexa,	Venus staminea,	Buccinum altile,
Conus Marylandicus,	Balanus, (new,)	Pholas ovalis,
Artemis acetabulum,	Balanus, (new,)	Madrepora palmata,
Scutella Aberti, (new,)	Fusus parilis,	Cancellaria lunata,
Pectunculus, (new,)	Fusus rusticus,	Fissurella,
Fulgur coronatus,	Pleurotoma bicatenaria,	Astarte planulata,
Cytherea sayana,	Corbula idonea,	Dentalium dentalis,
Voluta solitaria,	Corbula cuneata,	Isocardia Markoèi, (new,)
Dispotea costata,	Cardium laqueatum,	Bones, &c., &c.,
Fasciolaria mutabilis,	Cardium	Teeth, &c., &c.
Fulgur fusiformis,	Turritella plebeia,	

Stated Meeting, January 10, 1842.

Present, forty Members.

PETER FORCE, Vice-President, in the Chair.

The following donations were received:

For the Cabinet.

Foliated Galena, from near Sunbury, Pennsylvania.—*From Professor W. R. Johnson.*

Gold Ores from Spottsylvania, Culpepper, and Orange Counties, Virginia; Charlotte, North-Carolina; and Blackbrier's, Georgia.—*From Dr. Marcus C. Buck, U. S. A.*

Card of American Insects, prepared by J. H. D'Bille.—*From the same.*

Address and Toast of General La Fayette, at Culpepper Court House, Virginia, in his own hand-writing.—*From the same.*

Silk Fan, woven by silk worms trained by Miss E. Tutt, of Virginia.—*From the same.*

Plaster cast of Christ.—*From Mr. Gill.*

Snakes from Greenleaf's Point, D. C.—*From some Boys.*

Petrifaction from Pilot Knob, Kentucky.—*From H. W. Darnall.*

Insects from the District of Columbia.—*From Mr. Smith.*

Iguana, from the Gallipagos Islands.—*From John Boyle.*

Indian Pouch, from Missouri.—*From Miss L. A. O'Brien.*

Box of fresh water Shells of the Potomac river, (Unio, Cyclas, Melania, Paludina, Planorbis, Physa, &c.)—*From Master Henry C. Force.*

Anser canadensis, (common Wild Goose,) Potomac river.—*From the same.*

Nankeen colored Cotton.—*From Seth Sweetzer, U. S. Consul, Guayaquil.*

Valuable Microscope.—*From W. G. Cranch.*

Fungus of the District of Columbia.—*From H. Gee.*

Two specimens of Cathartes aura, (Turkey Buzzard,) from Maryland.—*From Manning F. Force.*

Cygnus americanus, (Swan,) Potomac river.—*From Edward L. Force.*

Alauda cornuta, Washington.—*From John K. Townsend.*

Musophaga, Africa.—*From John K. Townsend.*

Columba, Australia.—*From John K. Townsend.*

Lamprotornis, India.—*From John K. Townsend.*

Nectarinia, India.—*From John K. Townsend.*

Falco hyemalis, (winter Falcon,) Washington.—*From W. Wallace, M. D.*

Merganser castor, (Goosanders,) two specimens, Potomac river.—*From R. J. Pollard.*

Larus eburneus, Potomac river.—*From Martin Johnson.*

Regulus cristatus, Washington.—*From Martin Johnson.*

Pteromys volucella, Washington, (flying squirrel, albino.)—*From C. W. Longdon.*

Sorex, (undescribed) (shrew Mouse,) Columbia river.—*From J. K. Townsend.*

Lizard, six ground Rattle Snakes, two Ring Snakes, six Centipedes, Horned Frog, four Tarantulas, Copper Head Snake, Scorpion; from Louisiana.—*From N. S. Jarvis, Surgeon of United States Army, Fort Jesup.*

For the Library.

Liceo, Premios florales de 1841.—*From the Liceo Artistico y Literario de Madrid.*

Berliner Gewerbe Industrie und Handelsblatt, Nos. 10, 11, 12, and 13; Berlin, 1841.—*From H. Wheaton, American Minister, Berlin.*

Notice of a model of the western portion of the Schuylkill, or southern coal field of Pennsylvania, in illustration of an Address to the Association of American Geologists, on the most appropriate modes of representing Geological Phenomena, by R. C. Taylor, of Philadelphia.—*From the Author.*

A Plea for a National Museum and Botanic Garden, to be founded on the Smithsonian Institution at the City of Washington. Read before the Chester County Cabinet of Natural Science, Decem-

ber, 1841; by William Darlington, M. D., (several copies.)—*From the Author.*

Memorial of Joshua Leavitt, to the Legislature of New-York, setting forth the importance of an equitable and adequate market for American Wheat, accompanied with Statistical Tables; May 17, 1841.—*From Joshua Leavitt.*

Memorial of the same to Congress, praying the adoption of measures to secure an equitable and adequate market for American Wheat; February 25, 1841.—*From Joshua Leavitt.*

The Reference Book of the United States, by Edmund F. Brown; 1841.—*From the Author.*

Map of Baltimore, of 1792.—*From R. B. Fowler.*

Monuments of Washington's Patriotism; being a fac-simile of his Accounts during the Revolutionary War, &c.—*From the Trustees of the Washington Manual Labor School.*

Treatise on Anthracite Iron and the evaporative power of various species of Coal, by Professor Walter R. Johnson.—*From the Author.*

The Corresponding Secretary reported the following letters and communications:

From J. Henshaw Belcher, of Philadelphia: Enclosing a memorial to Congress, praying that body to cause the astronomical observations which have already been made to be reduced and computed for the establishment of the longitude of Washington, and asking the coöperation of the members of the National Institution in advancing the object of the application.

From Professor W. R. Johnson, Philadelphia: Submitting a paper on the practical determination of the heating power of Fuel.

From J. W. Williams, U. S. Consul, Sidney, New South Wales: Enclosing a letter from Mrs. Dr. James Mitchell, of Sidney, who has presented valuable contributions to the Cabinet of the Institution.

From W. H. Smyth, Cardiff, Wales: Stating that he had forwarded for the Institution a specimen of a planetarium recently produced by Mr. Burke, of Bristol, England, &c., &c.

From A. D. Bache, Philadelphia: On the subject of the Institution to which Mr. Smithson belonged.

From N. S. Jarvis, Surgeon U. S. Army, Fort Jesup: Expressing a purpose of forwarding to the Institution other objects of natural history, in addition to those already presented by him through Col. Abert.

From James M. Allen, M. D., Albany: Offering geological specimens, and expressing a wish to contribute to the objects of the National Institution.

From John H. B. Latrobe, Baltimore:

BALTIMORE, *December* 18, 1841.

DEAR SIR: When it was determined to fix the seat of Government of the United States at Washington, a premium was offered for a design for the public buildings, and there came in consequence, from all quarters, productions of the then architectural ability of the United States. These fell into my father's possession while he was engaged in building the Capitol, in the early part of the present century. Whether he found them already collected, or whether he gathered them together from time to time, I do not know; but they now fill a large portfolio, which has come into my hands, along with the rest of my father's papers, since his death. As specimens of the fine arts, the designs, whether on the score of plan or drawing, are generally below mediocrity, and some are infinitely and amusingly preposterous; but as facts in the history of the arts in America, they have a value which makes a public depository for them better than the library of a private individual; nor do I know where I can, with more propriety, offer them, than to the National Institution. The purpose of addressing you, therefore, is to ask you to tender to that Institution the portfolio of drawings in question; and if it shall be deemed worthy of acceptance, I will have it sent to Washington. In making this offer, I do it as well on behalf of my brother, Benjamin H. Latrobe, as myself.

I have spoken above of a premium having been offered for a design. I would add that on this point I may be mistaken. The drawings, however, speak for themselves. I am, respectfully and truly,

JNO. H. B. LATROBE.

From the Hon. L. F. Linn, United States Senator from Missouri, enclosing the following correspondence:

MARLY LE ROY, *September* 28, 1841.

SIR: I hasten to send you the enclosed copy of a letter which I have just received from Mons. Dufresnoy, "Chief Engineer and Director of the Royal School of Mines," and one of the most eminent mineralogists of our age—an impartial man whom nothing can bias. The opinion of such a man will, I think, be of immense advantage to the State of Missouri, and will remove many of the difficulties which may be encountered in the explorations of its precious mines. I am laboring with the same activity and ardor, as you well know, to establish between my country and yours, relations which shall more and more strengthen, and finally consolidate the bond of union between the two nations—relations based upon the sciences, the arts, and religion. If you ever have occasion to speak to your brother Senators of

this Vattemare who has troubled them so much, tell them that your dear and beautiful country is ever the object of his sincere devotion, and the subject of his most sacred thoughts.

Believe in the sentiments of respect and thanks with which I am, your servant and friend, ALEXANDRE VATTEMARE.

To Dr. LINN, *Senator of the United States.*

Copy of the letter of Mr. Dufresnoy.

ROYAL SCHOOL OF MINES, PARIS, *September* 18, 1841.

SIR: The specimen of oxide of iron, taken from the mountains of Missouri, which Senator Linn, at your request, has sent to the School of Mines, arrived a few days since at Havre, and has already become the ornament of our collections. In the name of the council of the school, I thank you for this magnificent specimen. Notwithstanding its almost gigantic dimensions, (sixty-six millimetres in diameter,) it is complete in all its parts. From a careful examination of it, we are led to believe that the mountains of Missouri contain masses of iron which will compete with the most beautiful mines of Danimoura, in Sweden, which furnish the iron most esteemed in Europe. Besides its interest in a mineralogical point of view, the present of Mr. Linn is highly esteemed by us, because it commences the system of exchange which you have sought to establish between all the nations of the New and the Old Continents, and which alone can secure the completion of our collections. Be assured, sir, that the professors of the School of Mines take great interest in the success of your enterprise, so useful to science, and will concur in it by transmitting to you specimens of mineralogy and geology, for the foreign museums that may wish to enter the field which you have opened with so much devotion.

Even before we were apprised of the kind intentions of Mr. Linn, the School of Mines had delivered to Mr. D. B. Warden, former Consul General of the United States at Paris, and correspondent of the Academy of Science, at his request, a box of specimens of mineralogy, to be deposited in the cabinet of the National Institution at Washington. The School of Mines will not, however, confine itself to their first transmission of specimens; and it hopes that, through your care, the exchanges will become more frequent.

Be pleased, sir, to accept the assurances of my most distinguished consideration.

(Signed) DUFRESNOY.

MONS. ALEXANDRE VATTEMARE.

From Dr. E. Foreman, of Baltimore: Communicating a paper on the subject of exchanges of conchological specimens.

From Rev. R. R. Gurley, Washington: Suggesting to the National Institution the advantage of purchasing the Indian Museum of the late Colonel Hook, U. S. Army.

From T. Purrington, Washington.

From W. Darlington, M. D., West-Chester, Pennsylvania.

From A. H. Palmer, New-York.
From J. Coppinger, New-York.
From W. Bacon Stevens, M. D., Savannah, Georgia.
From Hon. J. R. Ingersoll, Member of Congress.
From Captain J. Sanders, Engineer Corps, New-York.
From J. H. B. Latrobe, Baltimore.
From Dr. Samuel G. Morton, Philadelphia.
From Joshua Leavitt, New-York.
From S. F. B. Morse, New-York.
From James Glenn, Pratt's Hollow, New-York.
From H. H. Sylvester, Washington.
From Hon. Albert Gallatin, New-York.
From Dr. Marcus C. Buck, U. S. Army.
From W. Harvey Kenney, M. D., Philadelphia.
From Edmund F. Brown, Washington.
From Jared Sparks, Cambridge, Massachusetts.
From Mrs. Dr. James Mitchell, Sidney, New South Wales.
From M. Jomard, Paris.
From Camille Zeringue, Jefferson Parish, Louisiana.
From R. C. Taylor, Philadelphia.
From T. A. Conrad, Philadelphia.

The following letter from the Hon. H. S. Legaré, Attorney General of the United States, was read:

OFFICE OF THE ATTORNEY GENERAL, *December* 18, 1841.

GENTLEMEN: I have had the honor to receive your letter of the 1st instant, in which you inform me, on behalf of the National Institution for the Promotion of Science, that its constitution makes the Heads of Departments, at Washington, directors of it, provided they consent to serve.

Feeling, as I do, a lively interest in the promotion of all liberal studies, I shall be too happy to contribute, in however slight a degree, to further the objects of your society. But in accepting, as I do, very gratefully, the honor to which I have been officially called by you, I must bespeak for myself the indulgence which I know I shall require, if the active performance of my duties, as a Director, be prevented by engrossing business of a different kind.

I have the honor to be, with high consideration, gentlemen, your obliged and obedient servant, H. S. LEGARE.

Messrs. J. J. ABERT,
A. O. DAYTON,
FRANCIS MARKOE, JR.

The Treasurer submitted his Second Annual Report of the fiscal affairs of the Institution, accompanied by statements giving a detail of the receipts and disbursements during the year ending on the 31st December, 1841; and a list of the members of the Institution, and the payments made by them respectively.

On motion of Lieut. Gilliss, it was

Resolved, That the letter of Professor J. Henshaw Belcher, with the accompanying memorial, be referred to the Department of Astronomy, &c., with directions to report at the earliest expedient meeting of the Institution.

On motion of Mr. Lawrence, it was

Resolved, That the annual meeting for the election of Officers be held on the 24th instant.

Annual Meeting, January 24, 1842.

Present, forty-two Members.

PETER FORCE, Vice-President, in the Chair.

The following Officers of the National Institution were duly elected for the year 1842.

President.

Hon. JOEL R. POINSETT.

Vice-President.

PETER FORCE.

Directors on the Part of the Institution.

Hon. WILLIAM C. PRESTON, *U. S. Senate.*
Hon. LEVI WOODBURY, *U. S. Senate.*
Com. LEWIS WARRINGTON,
Col. J. J. ABERT,
Col. J. G. TOTTEN,
AARON O. DAYTON.

Corresponding Secretary.

FRANCIS MARKOE, JR.

Recording Secretary.

GARRET R. BARRY.

Treasurer.

WILLIAM J. STONE.

The Corresponding Secretary announced the arrival of Mr. Castelnau's entomological collection.

Whereupon, it was

Resolved, That a committee be appointed to open and examine the collection, and to report upon it previous to its being deposited in the Cabinet of the National Institution; and, that a copy of the report, giving the number and contents of the cases, and the condition in which they may be found, be furnished to Mr. Castelnau's attorney.

Mr. James P. Espy, of Philadelphia, exhibited his nephelescope, and briefly explained its powers and uses, and gave an outline of the elements of his theory or philosophy of storms.

The nephelescope of Mr. Espy is a glass vessel, containing about a gallon, furnished with a condensing pump and barometer gauge, with an attached scale. With the condensing pump, air could be forced into the vessel, and with the gauge, the quantity forced in could be measured. A stop-cock was also attached to the instrument, which, on being opened, would let the air which had been forced in escape. At the moment of escape, there would be an expansion, and the chief object of the instrument is to measure the exact degree of cold produced by any expansion, whether the air employed is dry, or whether it is saturated with aqueous vapor. This, he stated, it was most important to know, from its connection with meteorology; and it was from the result obtained that he was enabled to frame his theory of storms, and other atmospheric phenomena. Mr. Espy stated that he had performed many hundred experiments with this instrument, employing sometimes dry and sometimes moist air; and he found that when moist air was used at the temperature of about 71° of Fahr. the reduction of temperature for a given expansion was only about half as great as in dry air. If the temperature was lower, more than half; and if the temperature was higher, less than half; and in general the higher the temperature the less was the reduction in moist air, and the greater the reduction in dry air. In this way Mr. Espy was enabled to measure with great accuracy the expansion which the evolution of latent caloric during the formation of cloud produces on the air in which the cloud is formed. This expansion he had found to be about eight thousand cubic feet for every cubic foot of water generated in a cloud by the

condensation of vapor. Mr. Espy showed, that a dense cloud is actually produced in the nephelescope at the moment of expansion when moist air is used, and that the quantity of expansion thus obtained by experiment actually agrees with the result obtained by calculation founded on the well known laws of latent caloric of steam, specific caloric of atmospheric air, and expansion of air by heat.

Mr. Espy then gave a brief outline of the elements of his theory or philosophy of storms, nearly in the following words:

Up-moving currents of air may be formed either by heat or moisture. In ascending they will come under less pressure and expand; in expanding they will become colder about one degree and a quarter for every hundred yards of ascent; and as the dew-point sinks by this expansion about one quarter of a degree, cloud will begin to form in the up-moving current, at about as many hundred yards high as the dew-point at the time is below the temperature of the air in degrees.

When the vapor begins to condense into cloud, the latent caloric will begin to be evolved, and the higher the column ascends the more vapor will be condensed, and the more latent caloric will be evolved, and above the base of the cloud the air in ascending one hundred yards will cool only about one half as much as it would do if no vapor was condensed. Now, as the law of cooling on the outside of the ascending column is known to be about one degree for every hundred yards of ascent into the atmosphere, the temperature of the air in the inside of the ascending column may be compared, at all its different heights, with the air on the outside; and consequently their relative specific gravities will thus be known. On making such comparison, Mr. Espy showed, that when the dew-point is very high, and the cloud thus formed of great perpendicular diameter, its specific gravity would be so much less than that of the surrounding air as to cause the barometer in extreme cases to fall nearly three inches, or about as much as it is known to do in great storms. The evolution of latent caloric, then, in the formation of cloud, Mr. Espy contends, is not merely a *vera causa*, but the sole cause of the fall of the barometer in storms, unless it shall be shown that this instrument sometimes actually falls more than three inches, which it has never yet been known to do. Mr. Espy then went on to show that his theory was demonstrated by three independent methods. First, by calculations founded on well known physical laws; second, by experiments with the nephelescope; and, third, by its ability to explain all the phenomena. Under the last head a few were mentioned which he deemed decisive of the question. The great degree of cold suddenly produced necessary to condense such immense quantities of vapor as are known to be condensed, in particular cases, can not be accounted for on any supposition but the up-moving current of air in the cloud. At Joyeuse, on the 9th of October, 1827, there fell over a small territory thirty-one inches of rain in twenty-two hours, and the latent caloric given out by the condensing vapor producing this rain, would be sufficient to heat the lower half of the atmosphere over the region where the rain fell about six hundred degrees. At the mouth of the Catskill, on the 26th July, 1819, there fell over a region of nine miles in diameter, ten inches of rain in half an hour, which would give out latent caloric enough to heat the lower half of the atmosphere two hundred degrees; or, in other words, would produce about the same effect in producing an up-moving as seven thousand tons of anthracite coal burnt in half an hour, over each square

mile of the whole region where the rain fell; for it would require about this quantity of coal to be burned to turn all the rain back again into vapor. The rush of air on all sides towards the centre of storms, with a continued depression of the barometer in that centre, could not be accounted for on any supposition but that of the air being lighter in the region over which the storm cloud extended, and this was the leading fact of his theory. Mr. Espy stated, that he had now been able to investigate twenty-six great storms, besides numerous tornadoes, in all of which the wind did blow in towards a central space. The evidence of this fact is given abundantly in his *Philosophy of Storms*. It was impossible on the present occasion to bring forward and explain the numerous phenomena embraced by his theory; but he took the opportunity to say, that nothing was wanting now to make meteorology an exact science, and draw from his discovery of the cause of these phenomena all the advantages which the theory pointed out, but a series of wide-spread simultaneous observations, made by competent observers, with instruments of standard accuracy.

With such a system in complete operation, no storm could spring up or come within our borders without being under the eye of several observers. Thus the shape and size of all storms, the direction and velocity of their motion over the surface of the earth, and the force and direction of the wind during their passage, would be known. The quantity of rain, and the moment of its greatest fall, and also the moment of the maxima and minima of the barometer, a matter of high importance, would be known. The immense advantages resulting to the mariner, to say nothing of the farmer and citizens generally, would greatly overbalance any pains and expense which may attend the further prosecution of this subject. Indeed, any mariner who shall make himself acquainted with the science as it now stands, will be able both in the West Indies and in the bay of Bengal, to use as much wind in the borders of the tremendous hurricanes there, as will suit the purposes of navigation;* and in higher latitudes, where the storms are of immense diameter from north to south, and move side foremost, from westerly to easterly, he will know in what direction the centre of the storm is from his locality, and be able so to steer his vessel as to get out of the storm in the shortest possible time.

Whereupon, on motion of Col. Totten, it was

Resolved, That a committee be appointed to confer with Mr. Espy on the subject of his theory of storms, and to report what measures, if any, they deem it proper to be adopted by the National Institution, to aid in the investigation of meteorological phenomena.

The Corresponding Secretary stated, that early in the year 1841, a circular which was approved by the then directory, the Secretaries

* It has been demonstrated by Redfield, and confirmed by Reid, that the storms of the West Indies move towards the northwest; and Dr. Piddington has shown that the storms in the bay of Bengal, also move towards the northwest; and Espy has shown that the wind blows towards the centre of all storms in their borders.

of War and of the Navy, was addressed by him to the following foreign Societies and Institutions, announcing the establishment of the National Institution, enclosing the Constitution, &c., and other documents, and asking their correspondence:

1. The Royal Society, London.
2. Society of Antiquaries, London.
3. Mathematical Society, London.
4. British Museum, London.
5. Society for the Encouragement of Arts, Manufactures, and Commerce, London.
6. Royal Academy of Arts, London.
7. The Linnæan Society, London.
8. Horticultural Society, London.
9. Royal Asiatic Society, London.
10. Geological Society, London.
11. Royal Astronomical Society, London.
12. Zoological Society, London.
13. Royal Institution, London.
14. British Institution for Promoting the Fine Arts, London.
15. London Institution, London.
16. London Mechanics' Institution, London.
17. Western Literary and Scientific Institution for the Diffusion of Useful Knowledge amongst persons engaged in Commercial and Professional Pursuits, London.
18. City of London Literary and Scientific Institution, London.
19. Royal Society of Literature, London.
20. Society for the Diffusion of Useful Knowledge, London.
21. Royal Geographical Society, London.
22. Statistical Society, London.
23. Royal Institute of British Architects, London.
24. Institution of Civil Engineers, London.
25. Gwyneddigion Society, for the Cultivation of the Language of and Literature of Wales, London.
26. Microscopical Society, London.
27. Royal Academy of Sciences, Berlin.
28. Royal Academy of Arts, Berlin.

29. Royal Museum, Berlin.
30. Society of Naturforschender Freunde, Berlin.
31. Society for the Advancement of Horticulture in the Royal States, Berlin.
32. The Royal German Society, Königsburg.
33. Royal Academy of Useful Sciences, Erfurt.
34. Leopold-Caroline Academy of Naturforcher, Breslau.
35. Academie Royale des Sciences et Belles-Lettres, Bruxelles.
36. Academie Royale des Beaux Arts, Bruxelles.
37. Société Royale d'Horticulture, Bruxelles.
38. Société des Sciences Medicales et Naturelles, Bruxelles.
39. Museo Nacional de Ciencias Naturales, Madrid.
40. Academia Española, Madrid.
41. Academia de la Historia, Madrid.
42. Academia de las Nobles Artes, Madrid.
43. Academia de Ciencias Naturales, Madrid.
44. Liceo Artistico y Literario, Madrid.
45. Instituto Español, Madrid.
46. The Society of Sciences, Prague.
47. The Institute of Sciences and Arts, Milan.
48. Hungarian Literary Society, Pesth.
49. The Johanneum, (Literary Institution,) Grätz.
50. The Ferdinandeum, (Literary Institution,) Innspruck.
51. 52. 53. Societies of Sciences, Munich, Göttingen, and Berlin.
54. L'Institut Royal de France, Paris.
55. L'Academie Royale de Medecine de France, Paris.
56. La Société d'Encouragement pour l'Industrie Nationale, Paris.
57. La Société Royale des Antiquaires de France, Paris.
58. La Société Royale et Centrale d'Agriculture, Paris.
59. La Société Geologique de France, Paris.
60. L'Academie de l'Industrie Française, Agricole, Manufacturiere, et Commerciale de France, Paris.
61. La Société Française de Statistique Universelle, Paris.
62. L'Academie Royale des Sciences, Stockholm.
63. L'Academie Royale des Belles Lettres, d'Histoire, et d'Antiquités, Stockholm.

64. La Société des Sciences, Upsal.
65. L'Academie des Sciences Militaires, Stockholm.
66. The Royal Society of Edinburgh.
67. The Wernerian Natural History Society, Edinburgh.
68. The Society of Antiquaries, Edinburgh.
69. The Phrenological Society, Edinburgh.
70. The Plinian Society, Edinburgh.
71. The Society of Arts for Scotland, Edinburgh.
72. The Geological Society, Edinburgh.
73. Royal Irish Academy, Dublin.
74. Geological Society, Dublin.
75. Zoological Society, Dublin.
76. Phrenological Society, Dublin.
77. Philosophical Institution, Birmingham.
78. Royal Institution, Liverpool.
79. Philosophical and Literary Society, Liverpool.
80. Literary and Philosophical Society, Manchester.
81. Institut Royal des Sciences, de Literature, et de Beaux Arts, Amsterdam.
82. Société Hollandaise pour les Sciences, Haarlem.
83. Société de Literature Neerlandaise, Leyden.
84. Société de Literature Diligentia, the Hague.
85. Société des Arts et Sciences, Utrecht.
86. Société des Arts et Sciences, Bois-le-Duc.
87. Société des Sciences, Hissinque.
88. Academie des Sciences, St. Petersburgh.
89. L'Academie Russe, St. Petersburgh.
90. Institut Pedagogique Central, St. Petersburgh.
91. Société Imperiale de Mineralogie, St. Petersburgh.
92. Academie Imperiale de Médecine, et de Chirurgie, St. Petersburgh.
93. Jardin Botanique de l'Empire, St. Petersburgh.
94. Société Imperiale d'Histoire Naturelle, Moscow.
95. Société des Amateurs de la Literature Russe, Moscow.
96. Academie Imperiale de Medecine et de Chirurgie, Moscow.
97. Société d'Archéologie et d'Antiquités Russes, Moscow.

98. L'Accademia delle Scienze, Naples.
99. L'Accademia delle Scienze, Turin.
100. The Royal Society of Sciences, Copenhagen.
101. The Society for the Promotion of the Fine Arts, Copenhagen.
102. The Scandinavian Literary Society, Copenhagen.
103. The Royal Society for National History and Language, Copenhagen.
104. The Royal Medical Society, Copenhagen.
105. The Society for the Promotion of Natural Philosophy, Copenhagen.
106. The Royal Society for Public Instruction in Iceland, Copenhagen.
107. The Iceland Literary Society, Copenhagen.
108. The Royal Society for Northern Antiquities, Copenhagen.
109. La Société Archéologique d'Athènes, Athens, Greece.

Stated Meeting, February 14, 1842.

Present, thirty-five Members.

PETER FORCE, Vice-President, in the Chair.

The following donations were received:

For the Cabinet.

Belt made and worn by the Natives of the Island of Ascension.—*From Robert S. Chew.*

Statuary Marble from Middlebury, Vermont, and from Frederick, Maryland.—*From J. M. Allen, M. D., Albany.*

Fossils from near the confluence of the Alleghany river and Brodrenstraw creek, Pennsylvania.—*From W. A. Irvine.*

Entomological Cabinet, Herbarium, &c., of Mr. Castelnau, U. S. Consul at Lima.—*Deposited by Mr. Castelnau.*

Two boxes of Ores and Minerals, from the District of Holguire, in Cuba.—*From Thomas G. Clemson.*

Mosaic, from Baiæ, near Naples.—*From Captain W. K. Latimer, U. S. N.*

Ichthyolite, from Mount Lebanon, Syria.—*From the same.*

Quartz Crystals, from Mount Lebanon, Syria.—*From the same.*

Antique Bronze and Clay Lamps, from Baiæ.—*From the same.*

Fossils, from Mount Lebanon.—*From the same.*

Egyptian Idols, from the tombs near the Pyramids.—*From the same.*

Antique Silver and Copper Coins, from Syria, Greece, and Samos.—*From the same.*

Antique Copper Coins, from Baiæ.—*From the same.*

Bur of the Cedar of Lebanon.—*From the same.*

Coral, found on the necks of Mummies interred near the Pyramids.—*From the same.*

Fossil Pentremites, (lapis judaicus,) called Petrified Olives, from the Mount of Olives, near Jerusalem.—*From the same.*

Three Antique Figures, from Baiæ.—*From the same.*

Mosaic, beautifully designed and executed at Rome, showing the varieties of Marble from Carrara.—*From the same.*

Birds and Quadrupeds.—*From J. K. Townsend.*

List:

3 Trochilus sephanoides, *Chili.*
1 Trochilus prasina, *Brazil.*
1 Sylvia americana, *Pennsylvania.*
1 Sylvia canadensis, *Pennsylvania.*
1 Muscicapa ruticella, *Pennsylvania.*
2 Vireo olivaceus, *Pennsylvania.*
1 Vireo gibbus, *Illinois.*
1 Sturnella ludoviciana, *New-Jersey.*
1 Quiscalus ferrugineus, *N. Caledonia.*
3 Icterus spurius, *Pennsylvania.*
1 Icterus agripennis, *Pennsylvania.*
2 Fringilla caudacuta, *Cape May, N. J.*
6 Fringilla maritima, *Cape May, N. J.*
1 Fringilla cyanea, *Pennsylvania.*
2 Rallus carolinus, *Pennsylvania.*
1 Sterna arctica, *New Caledonia.*

QUADRUPEDS.

1 Lepus Nuttalii, (unique specimen,) *Rocky Mountains.**
3 Arvicola xanthognatus, *Pennsylv'a.*

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* *Lepus Nuttalii*, Bachman, Journal Academy National Sciences, Philadel'a; vol. VII, p. 345, pl. 22. This specimen was shot by Mr. J. K. Townsend, on the north branch of the Platte river, in the Rocky Mountains. Some twenty or thirty of the same species were seen by the party with which Mr. Townsend travelled, but, unfortunately, the present was the only specimen procured. Dr. Bachman, before writing his description of this new animal, visited the principal museums in Europe with the view of finding another individual of the same species, but was unsuccessful. This therefore is an unique specimen.

Mass of Silicified Wood, from the Island of Antigua.—*From Francis Markoe, Jr.*

Birds and Quadrupeds.—*From Thomas Tonge.*

List:

2 Merganser castor, *Washington.*
1 Larus argentatus, *Washington.*
1 Larus Bonapartii, *Washington.*
1 Buteo hyemalis, *Washington.*
1 Fringilla pinus, *Washington.*
1 Picus pubescens, *Washington.*

Birds.—*From R. J. Pollard.*

List:

2 Fringilla pinus, *Washington.*
1 Buteo hyemalis, *Washington.*
1 Falco sparverius, *Washington.*
1 Picus carolinus, *Washington.*
2 Coccothraustes cardinalis, *Wash'n.*
1 Alauda cornuta, *Washington.*
1 Cynanthus jugularis, *Brazil.*
1 Trochilus cristatus, *Brazil.*
1 Pyranga rubricapilla, *Brazil.*
1 Guiraca cœrulea, *Washington.*
1 Ardea herodias, *Washington.*
1 Fuligula vallisneria, *Washington.*
2 Fuligula marila, *Washington.*
1 Fuligula perspicillata, *Washington.*
1 Fuligula albeola, *Washington.*
1 Fuligula ferina, *Washington.*
1 Anas americana, *Washington.*
1 Falco cooperii, *Washington.*
1 Mimus polyglottus, *Washington.*
1 Colymbus glacialis, *Washington.*
1 Anas crecca, *Washington.*
2 Anas sponsa, *Washington.*
1 Fringilla savanna, *Washington.*
1 Fringilla socialis, *Washington.*
1 Fringilla palustris, *Washington.*
1 Anas boschas, *Washington.*
1 Anas strepera, *Washington.*
1 Quiscalus ferrugineus, *Washington.*
1 Agelaius phœniceus, *Washington.*
1 Numidia meleagris, *Washington.*
1 Strix otus, *Washington.*
2 Regulus satrapa, *Washington.*
1 Cygnus americanus, *Washington.*

QUADRUPEDS.

3 Fiber zibethicus, (musk rats,) *Washington.*

Guiraca cærulea, Washington.—*From Dr. A. McWilliams.*

Fringilla canadensis, Washington.—*From Wm. M. Baird.*

Certhia familiaris, Washington.—*From A. F. A. Brown.*

Parus bicolor, Washington.—*From A. F. A. Brown.*

Cercocebus sabœas? Africa, (Monkey.)—*From W. Beron.*

Lepus virginianus, (common gray Rabbit,) Washington.—*From Mrs. Hays.*

Coccothraustes cardinalis, Washington.—*From Mrs. Hays.*

Buteo hyemalis, Washington.—*From John Holohan.*

Humeral, radial, and ulna Bones of Albatross.—*From M. Johnson.*

Lower Maxillary Bones of Didelphus.—*From Martin Johnson.*

Spine of Squalus.—*From Martin Johnson.*

Section of Cinnamon Wood.—*From Martin Johnson.*

Coins, (copper.)—*From Martin Johnson.*

Medal, (copper.)—*From Robert Graham.*

Mineralized Wood.—*From Robert Graham.*

White Marble, of which the new General Post Office is built.—*From Robert Brown.*

Potomac Marble, (breccia.)—*From Robert Brown.*

Fossils, from James River.—*From Robert Brown.*

Fuligula marila, two specimens.—*From J. G. Bell, of New-York.*

Coin of United States, 1783.—*From George W. Palmer, Baltimore.*

Bust of Cuvier.—*From Dr. Richard Harlan, of Philadelphia.*

Ostrea virginica, (cluster.)—*From Mr. Walker.*

Beaver, (tail,) (castor fiber.)—*From R. Coltman.*

Coins, of United States.—*From James Callaghan.*

Sulphuret of Lead.—*From Dr. T. B. J. Frye.*

Squalus, (teeth.)—*From Dr. T. B. J. Frye.*

Astrea, (star fish.)—*From Dr. T. B. J. Frye.*

Continental Paper Money, (1776.)—*From Dr. T. B. J. Frye.*

Coins, Silver and Copper, (eleven pieces.)—*From Wm. Shoemaker.*

Coins, Copper, (thirty-eight pieces.)—*From R. B. Fowler.*

Medal, Spanish.—*From George Shoemaker.*

Carapex and Plastron, of Terrapin, (Emys.)—*From John Bertzel.*

Antlers of Elk, (cervus canadensis.)—*From Col. Joseph Tuley, of Virginia.*

For the Library.

Nouveau Dictionnaire des Passagers, in German and French, by J. L. Frisch; Leipsig, 1746; 4to.—*From Col. J. J. Abert.*

Lectures on Electricity, by G. C. Morgan; Norwich, 1794; 2 vols. 8vo.—*From the same.*

New British Traveller, or Complete Modern Universal Display of Great Britain and Ireland, by G. A. Walpole; London; folio.—*From the same.*

Document No. 158, House of Representatives, 20th Congress, 1st Session; in relation to the growth and manufacture of Silk, adapted to the different parts of the Union.—*From the same.*

Elements of the Geometry of Planes and Solids, with plates, by F. R. Hassler; 1828; 8vo.—*From the same.*

New and Compendious System of Optics, by B. Martin; London, 1740; 8vo.—*From the same.*

Mathematical Elements of Natural Philosophy, &c., or Introduction to Sir I. Newton's Philosophy, by W. J. Gravesande; London, 1737; 8vo.—*From the same.*

Fauna Americana, by R. Harlan, M. D.; Philadelphia, 1825; 8vo.—*From the same.*

Elements of the Theory and Practice of Chemistry, translated from the French of M. Macquer; London, 1775; 2 vols. 8vo.—*From the same.*

Rational Recreations, &c., &c., in Natural Philosophy, &c., &c., by W. Hooper, M. D.; London, 1774; 4 vols. 8vo.—*From the same.*

Journal or Historical Account of the Life, Trials, Sufferings, Christian experiences and labor of love in the work of the Ministry, by George Fox; London, 1765; folio.—*From the same.*

North-American Review, from January, 1827, to December, 1841.—*From the same.*

Orderly Book, (original,) containing an account of the campaign under General James Clinton, at Canajoharie Creek, Otsego Lake, in the Susquehannah Valley, from June, 1779, to August, 1780.—*From Giles F. Yates, of Schenectady.*

A New Guide to Washington, by George Watterston; Washington, 1842.—*From the Author.*

MSS. Statistical Papers, relating to the District of Columbia, by John Sessford.—*From the Author.*

Galerie Militaire, ou Notices Historiques, sur les Generaux en Chef, &c., &c., qui ont commandé les Armées Françaises, &c., &c., orné de Portraits, par F. Babie et L. Beaumont; 7 vols. 12mo.; Paris, An. xiii.—*From H. K. Randall.*

Library of Useful Knowledge, twenty-six Nos.; 8vo., London; Nos. 1, 2, 3, 4, 5, 9, 12, 13, 15, 16, 17, 19, 21, 22, 23, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35.—*From the same.*

Address, delivered before the Columbian Institute, for the promotion of Arts and Sciences, at the City of Washington, 11th of January, 1817, by Edward Cutbush, M. D.—*From the same.*

A Brief description of the Agaricus atramentarius, with a statement of some of its singular properties, and a lithographic view of the plant in its different changes, by John Redman Coxe, M. D., of Philadelphia; 1842.—*From the Author.*

Catalogue of the Officers and Students of Dartmouth College, 1840, 1841, 1842.—*From the Rev. William Cogswell.*

Comparison of Weights and Measures of length and capacity, &c., made by F. R. Hassler, Washington, 1832, (22d Congress, 1st Session, Doc. 299, House of Reps.)—*From F. R. Hassler.*

Principal documents relating to the Coast Survey of the United States, since 1816, published by Mr. Hassler, Superintendent of the Survey; New-York, 1834.—*From the same.*

Second volume of principal documents of Coast Survey, from October, 1834, to November, 1835, by the same.—*From the same.*

Third volume of principal documents of Coast Survey, and the construction of uniform standards of Weights and Measures for the Custom Houses and States, from November, 1835, to November, 1836, by the same; New-York, 1836.—*From the same.*

Documents relating to standards of Weights and Measures, from 1832 to 1835, by the same; 1836.—*From the same.*

Report of the Secretary of the Treasury, transmitting Report of Mr. Hassler, (25th Congress, 2d Session, Senate.)—*From the same.*

Report of the Secretary of the Treasury, transmitting Report of Mr. Hassler, showing the progress of Coast Survey, and of the fabrication of standard Weights and Measures, (25th Cong., 3d Session, Senate.)—*From the same.*

Letter from the Secretary of the Treasury, communicating Annual Report of Mr. Hassler, on the Coast Survey, and Weights and Measures, (26th Cong., 1st Sess., Senate.)—*From the same.*

Letter from the Secretary of the Treasury, transmitting Report of Mr. Hassler, on standard Weights and Measures, (26th Cong., 1st Sess., Ho. of Reps. Doc. No. 261.)—*From the same.*

Letter from the Secretary of the Treasury, transmitting Report of Mr. Hassler, on the Coast Survey, and Weights and Measures, (26th Cong., 2d Sess., Ho. of Reps. Doc. No. 14.)—*From the same.*

Letter from the Secretary of the Treasury, transmitting Report of Mr.

Hassler, respecting Ounce Weights, (27th Cong., 1st Sess., Ho. of Reps. Doc. No. 33.)—*From the same.*

Letter from the Secretary of the Treasury, transmitting Report of Mr. Hassler, showing the progress made in the Coast Survey, (27th Cong., 2d Session, Ho. of Reps. Doc. No. 28,) (four copies.)—*From the same.*

Report of the Secretary of the Treasury, respecting Expenditures, &c., of the Coast Survey, (27th Cong., 2d Sess., Ho. of Reps. Doc. No. 57.)—*From the same.*

Statements and documents relative to the establishment of Steam Navigation in the Pacific, &c., &c.; London, 1838.—*From Wm. C. Zantzinger.*

The Western Shepherd, &c., &c., by George Flower, of Illinois.—*From the Author.*

New Views of the Origin of the Tribes and Nations of America, by Benjamin Smith Barton, M. D.; Philadelphia, 8vo. 1798.—*From Thomas Pennant Barton, of Philadelphia, son of the author.*

Observations on some parts of Natural History, to which is prefixed an account of several remarkable vestiges of an ancient date, which have been discovered in different parts of North-America, by the same.—*From the same.*

Memoir concerning the disease of Goitre, as it prevails in different parts of North-America, by the same; Philadelphia, 1800.—*From the same.*

Fragments of the Natural History of Pennsylvania, by the same.—*From the same.*

Catalogue of rare, curious and useful Books, &c., for sale by J. Pennington, Philadelphia; 1841.—*From H. A. Goldsborough.*

Phytologia, or Philosophy of Agriculture and Gardening, with the theory of draining Morasses, &c., by E. Darwin, M. D.; Dublin, 1800; 8vo.—*From Francis Markoe, Jr.*

Method of using the Chloride of Soda, &c., &c., by A. G. Labarraque, &c.; translated by Jacob Porter, 1833.—*From Jacob Porter.*

Topographical description and historical sketch of Plainfield, Massachusetts, 1834, by the same.—*From the same.*

Instructions and Observations concerning the use of the Chlorides of Soda and Lime, by A. G. Labarraque, translated by the same, 1840.—*From the same.*

Lecture on the connection and reciprocal influence between the Brain and Stomach, by Usher Parsons, M. D.; Providence, 1841.—*From the Author.*

List of the Geological Society of London, 1839.—*From Dr. R. Harlan, M. D., Philadelphia.*

Archæologia Americana; Transactions and Collections of the American Antiquarian Society, vol. 2; Cambridge, 1836; containing observations on the Indian tribes of North-America and their languages; by the Hon. Albert Gallatin.—*From Mr. Gallatin.*

Proceedings of the Academy of Natural Sciences of Philadelphia, vol. 1 to No. 9; December, 1841.—*From the Academy.*

Proceedings of the American Philosophical Society of Philadelphia, vol. 2 to No. 20; November and December, 1841.—*From the Society.*

Aggregate of the Statistics of the United States, on the 1st June, 1840, taken by the Marshals, in pursuance of an Act of Congress, passed 3d March, 1839.—*From William A. Weaver, Superintending Clerk of the Sixth Census.*

Transactions of the Maryland Academy of Science and Literature, vol. 1, part 1; Baltimore, 1837.—*From J. T. Ducatel, M. D.*

Third Exhibition of the Massachusetts Charitable Mechanic Association, at Quincy Hall, Boston, September 20, 1841.—*From the Hon. Samuel T. Armstrong.*

American Natural History—Mastology; by J. D. Godman, M. D.; second edition.—*From T. B. J. Frye, M. D.*

Feltham's Resolves, 1631.—*From J. J. Greenhough.*

History of the Conquest of Mexico, 1568.—*From R. B. Fowler.*

Discourse on the Revolutions of the Globe, by Cuvier.—*From R. B. Fowler.*

On the Coral formation of the Pacific Ocean, by S. P. Couthouy.—*From the Author.*

Monograph of the family Osteodesmacea of Deshays, by the same.—*From the Author.*

First and Second Book of Natural History, by W. S. W. Ruschenberger, Surgeon U. S. Navy.—*From the Author.*

History of the Bible, (in Chinese characters.)—*From Geo. Fuller.*

The Corresponding Secretary reported the following letters and communications.

From Henry J. Rogers, of Baltimore:

BALTIMORE, *January* 10, 1842.

SIR: I have the honor to present for consideration before the "National Institution for the Promotion of Science," the model of a Land and Marine Telegraph, of which I am the inventor.

For land operations, its simplicity may recommend it to favorable notice.

For sea service, it has been pronounced by several nautical gentlemen as being better adapted than any other system of telegraph now in use, as the signals are made with the same means on land or afloat.

The nature of my invention for sea service, consists in the application of balls, by being placed opposite to corresponding balls, which are attached to cordage at equal distances apart.

For land service, five circular boards of equal diameter, and of equal distance apart, attached to a perpendicular staff of sufficient size and elevation, with four or more additional balls raised by chains opposite to the circular boards or numerators.

I will proceed to describe its construction and operation for land service, which is as follows: I construct in the first place, a staff or mast sixty feet in height; which has attached to it, at the distance of twenty-three feet above the earth, a circular board of three feet diameter, and at intervals of three feet, I place four more circular boards or numerators.

The circular boards and interstices, I term numerators; the first circular board I count as one, the second as three, the third as five, the fourth as seven, and the fifth as nine; also, I count the first interstice as two, the second as four, the third as eight, and the fifth as ten; each of which being counted, numbers 1, 2, 3, 4, 5, 6, 7, 8, 9, 10.

The circular boards of three feet diameter being placed at intervals of three feet apart on the perpendicular staff, and facing the observer, can be seen at a great distance, and are easily distinguished from the interstices. I also use a horizontal yard-arm, which is attached at the centre horizontally to the staff, and six feet above the highest circular board, on which yard there is attached a board of a quarter of a circle, one of a semi-circle, and one of a segment or three-fourths of a circle, which I designate as markers. The last mentioned is placed on one end of the arm, presenting the same face as the circular boards, the next at a distance of four and a half or five feet, the other is placed five feet from the opposite end of the yard arm, to which there is a block; and to each of the markers I have a block, through *which blocks* pass light chains, and these chains run to windlasses within the "telegraph house," for the purpose of elevating the balls termed denominators, attached to the chains.

The first of which balls, attached to chain running to a *single* block, is termed units. The second ball, which is attached to chain running to block attached to quarter-circle or marker, is termed tens. Third ball, which is attached to chain running to block attached to semi-circular board or marker, is termed hundreds. Fourth ball, which is attached to chain running to block attached to three-quarter circular board or marker, is termed thousands.*

When the denominators are raised opposite to a numerator, they count thus: Units, the number opposite the ball; tens, ten times the number opposite the ball; and all other balls used to count in tenfold proportion. By this method, and using more balls, any amount of numbers may be signalled, to correspond with a "telegraph vocabulary." Within the "telegraph house," a dial is attached to each windlass, with an index pointing when a certain ball or denominator is opposite a certain numerator. I also use an index arm of eight or ten feet in length, attached on a pivot, worked by rods, to make signals to converse, count, spell, &c.

For sea service, I substitute balls made of canvass, covering a light iron frame, attached to cordage at equal distances apart, on the same principle as for land service.

My system may be used at night by substituting for the balls of the marine telegraph, lanterns or transparent balls.

Having thus described as well as I am able, the manner of constructing and using my telegraph for land and sea service, and night signals, I will state what I claim therein, and for what I desire to secure letters patent; namely, for the within described manner of arranging and placing the circular boards, balls, lights, and interstices, termed numerators, which number from one to ten inclusive. I also claim for the application of the balls, termed denominators, counting as units, tens, hundreds, thousands, and all additional balls, lights, &c., increasing in any proportion.

The signals for telegraph communications are variously stated, by fire signals, flags, shutters, and arms; the first of which can only be used at night with success. The second has objections during a calm, and while there is a shifting wind, cannot be readily recognised, owing to the undulatory motion of the flag, which prevents the different signals from being readily recognised, and causes delay and uncertainty.

Shutters and arms are objectionable, as they cannot be used at sea, or at night.

The advantages which my system of telegraph has over the others are:—

1st. Its simplicity of numeration.

2d. All the siginals denoting any number are up at the same time, and cannot be mistaken for any other than those intended to be communicated, as each ball expresses its appropriate figure.

3d. It may be used in either calm or rough weather.

4th. By substituting lights, we have a system of numeration by night.

5th. The advantage over the system in present use, is numerating perpendicularly, from one to ten inclusive.

6th. The signals may be distinguished at a greater distance than those made by either flags or shutters.

I also submit for your perusal a "telegraph vocabulary," which, owing to the

* Which balls read thus: Units, tens, hundreds, thousands.

frequent use of the same *numbers* for *different* words might be simplified, as it is divided into different classes, which use the same numerators for different words and sentences, which doubtless must create confusion.

I am engaged compiling one, for use either on land or afloat, which will contain all required words or phrases used in daily business or political transactions, by which I will be enabled to telegraph any communication.

The above are some of the advantages which my system of telegraph will have, and I avail myself of the present opportunity to give the outline of my vocabulary above mentioned.

I feel thankful to you for the assurance of friendly feeling manifested towards me, while in Washington, and solicit your aid in my behalf to introduce my invention to the notice of the "National Institution," the opinion of which I am desirous to obtain; and being a native born American, I feel a national pride in having the honor to submit the above for consideration before so laudable an Institution.

I am, sir, with great respect, your most obedient servant,

HENRY J. ROGERS.

From Thomas G. Clemson.—*Extract.*

HAVANA, *January* 15, 1842.

The ores, &c., contained in the boxes alluded to above, are principally, if not entirely, from the district of Holquine. They will be found interesting, as portraying the character of the mineral deposits of that region, as also of the rocks which occur in connection with the ores.

Some of the quartz specimens, you will remark, are very curious. I have found the quartz of the veins in Holquino to resemble in physical properties as well as chemical composition, those varieties of opals which occur in the tertiary formations of the environs of Paris.

Believe in the consideration with which I have the honor to be, most respectfully, yours, &c.,

THOMAS G. CLEMSON.

From E. Cutbush.—*Extract.*

GENEVA, NEW-YORK, *January* 20, 1842.

SIR: Permit me to acknowledge the receipt of your letter of the 11th instant, informing me of the honor of having been enrolled as a corresponding member of the National Institution, established at Washington for the promotion of science. I beg that you will have the goodness to convey my thanks to the members for this memento of their friendship and recognition of past services in the cause which has been so honorably revived at the seat of Government; and I most sincerely hope that all the objects which engaged the attention of Thomas Law, Esq., and myself, in 1816, in establishing the Columbian Institute, will *now* meet the approbation and support of the Government, and the scientific men of the District of Columbia. It gives me great pleasure to speak of Thomas Law; he was an enthusiast in the cause of science, the arts, agriculture and manufactures, and no one had the prosperity of the city of Washington more at heart.

I have the honor to subscribe myself, as your obedient servant,

E. CUTBUSH.

From W. C. Zantzinger.

WASHINGTON, *February* 7, 1842.

DEAR SIR: I take great pleasure in enclosing for the library of the National Institution, a book entitled, "Statements and documents relative to the establishment of steam navigation in the Pacific, with copies of the decrees of the Government of Peru, Bolivia, and Chile, granting exclusive privileges to the undertaking;" to which is annexed three charts, showing the proposed route of the steamers from England to the Isthmus of Panama, from Panama to Chile and Mexico; a tabular statement showing the distance in nautical miles between the several ports in the Pacific, the time now employed, and to be employed, in running between each; also the survey of that part of the Isthmus of Panama eligible for effecting a communication between the Atlantic and Pacific.

Since the publication of this volume, the enterprising projector of steam navigation in the Pacific, William Wheelright, Esq., has commenced running *two* of his line of steamers, as you will perceive by a letter from that gentleman, which is annexed, and to which I would most respectfully invite the attention of the scientific corps of our country, as it opens the way to a knowledge of the mineral productions of the south of Chile, heretofore almost unknown. The great difficulty in procuring fuel for the steamers induced Mr. Wheelright to explore that portion of the country, and his exertions have been crowned with success, having found coal in great quantities, well adapted for the use of steamers; and which can be obtained at so moderate a price as to supersede the necessity of importing it from England, which was done in the first instance, at great cost, and the supply of which could not be confidently calculated upon, owing to the protracted and boisterous passages from England via Cape Horn.

In conclusion, I take the liberty of nominating Mr. Wheelright as a corresponding member, feeling assured that, as a scientific gentleman, he will duly appreciate the honor, and prove a useful member of the Institution.

I am, dear sir, with great respect, your friend and obedient servant,

WILLIAM C. ZANTZINGER.

From Hon. Joel R. Poinsett.

PEDEE, SOUTH-CAROLINA, *February* 7, 1842.

DEAR SIR: I have the honor to acknowledge the receipt of your letter of the 27th ultimo, informing me that the National Institution had at the annual meeting for the election of officers reëlected me President. I am very sensible of and grateful for this distinguished mark of their favor, and hope to have it in my power in a short time to express my thanks in person, and to assume the duties of the station they have thought proper again to confer upon me. I hear on every side the most flattering accounts of our increasing collections, and congratulate you upon the progress of the Institution. The national legislature will, I trust, see in its prosperity a sufficient reason to continue its protection, and the expediency of entrusting us with the disposal of a fund destined to diffuse knowledge among men. I shall look with impatience for the next bulletin.

With great esteem and regard, I am, dear sir, yours faithfully,

J. R. POINSETT.

From J. H. B. Latrobe, Baltimore.

From Richard Harlan, M. D., Philadelphia: Enclosing description of fossil head of Delphinus calvertensis.

From Lieut. J. M. Gilliss, U. S. Navy: Enclosing magnetic and meteorological notice.

From W. A. Irvine, Warren county, Pennsylvania: With a large and valuable collection of Fossils from Pennsylvania, and a description of the locality.

From Giles F. Yates, Schenectady: Enclosing strictures on Greenhough's Statue of Washington.

From Capt. W. H. Swift, Topographical Engineers: Describing two models of timber Bridges which he has deposited in the Cabinet of the Institution.

From Robert W. Gibbes, M. D., Columbia, South-Carolina: Respecting the Spagnoletto picture presented by him to the Institution.

From James M. Allen, M. D., Albany: Promising as soon as spring navigation opens, to send on certain Geological specimens, &c.

From Hon. Walter Forward: Enclosing a letter from Mr. Allen, respecting Statuary Marbles of the United States.

From Stephen Taylor, Wisconsin: Stating that he had shipped in September last, a box of Unios, &c., &c., for the Institution.

From Joseph Brano, Philadelphia: Offering series of Fossil casts for sale, and applying for employment in the National Institution.

From Captain A. Canfield, Topographical Engineers: Suggesting an explanation of the geological phenomena of Drift, &c.

From A. H. Palmer, New-York: Proposing that the Sociedad de Industrial Nacional, of Rio Janeiro; and the Sociedad Economica de Amigos del Pais, of Caracas, should be enrolled among the correspondents of the National Institution.

From Samuel G. Morton, M. D., Philadelphia: Relative to the fossil head of Delphinus calvertensis, submitted to him for examination.

From H. Falconer, M. D., Serampore, East Indies.

From Capt. P. Cautley, Serampore, East Indies.

From Seth Sweetzer, U. S. Consul, Guayaquil.

From Charles C. Rafn, Secretary of the Royal Society of Northern Antiquaries Copenhagen.

From John Jones, Middletown, Delaware.

From W. P. Rowles, Pulaski, Tennessee.

From Capt. W. K. Latimer, U. S. Navy.

From Coppinger and Nantueil, New-York.

From Thomas Pennant Barton, Philadelphia.

From H. N. Crabb, Washington.

From Hon. J. L. Tillinghast, member of Congress.

From R. Dunglison, M. D., Philadelphia.

From J. K. Townsend, Washington.

From B. H. Latrobe, Baltimore.

From Rev. W. Cogswell, Dartmouth College, New-Hampshire.

From Thomas Sinclair, Philadelphia.

From C. G. Page, Fairfax County, Virginia.

From Dr. John Redman Coxe, Philadelphia.

On motion, it was

Resolved, That the circular of the Department of American History and Antiquities be published in the bulletin.

Resolved, That the land and marine telegraph invented by Mr. J. Rogers, of Baltimore, be referred to the Department of Science applied to the Useful Arts.

Resolved, That the plan proposed by Mr. J. H. B. Latrobe, of Baltimore, of procuring a series of designs of all the public buildings of Washington, for the Institution, be referred to the same Department.

Lieut. Gilliss, U. S. N., presented a copy of the Meteorological Journal kept at the Observatory under his charge, for the months of September, October, and November, 1841;

Also, tables, showing the means of the declination of the magnetic needle, barometric pressure and temperatures, for each of the magnetic hours during the months of July, August, September, October, November, and December, 1840.

The following is a general summary of the results:

Mean Westerly Declination at Washington City.

	July.	August.	September.	October.	November.	December.
Maximum..	1° 21′ 15″.0	1° 20′ 45″.5	1° 22′ 47″.0	1° 21′ 43″.0	1° 21′ 56″.7	1° 22′ 51″.0
Minimun...	1° 11′ 43″.0	1° 10′ 08″.7	1° 12′ 56″.0	1° 14′ 49″.0	1° 16′ 43″.8	1° 17′ 32″.0
Mean.....	1° 16′ 29″.0	1° 15′ 27″.1	1° 17′ 51″.5	1° 17′ 46″.0	1° 19′ 20″.2	1° 20′ 11″.5
Daily var'n.	9′ 32″.0	10′ 36″.8	9′ 51″.0	5′ 54″.0	5′ 12″.9	5′ 19″.0

The Barometer.

	July.	August.	September.	October.	November.	December.
Maximum..	30.118	30.074	30.139	30.098	30.009	30.075
Minimum..	30.056	30.028	30.030	30.041	29.947	30.003
Mean.....	30.087	30.051	30.084	30.069	29.978	30.039
Daily var'n.	.052	.046	.109	.057	.062	.072

Temperature.

	July.	August.	September.	October.	November.	December.
Maximum..	86°.5	84°.5	74°.0	67°.6	52°.3	40°.0
Minimum..	71°.0	72°.0	57°.8	49°.7	40°.5	29°.0
Mean.....	78°.7	78°.2	65°.9	58°.6	46°.4	34°.5
Daily var'n.	15°.5	12°.5	16°.2	17°.9	11°.8	11°.0

The maxima of the declination and temperature, for each of the months, except September, occur at the same hour, viz: 20hrs., Gottingen, 2hrs. 13″ P. M., Washington, but in that month, while the maximum declination was observed two hours earlier, that of the temperature was two hours later. Lieut. Gilliss stated, that this result did not arise from a single observation, which masked the regular period, but was actually the case on more than half the days of the month.

The minimum declination, except for December, falls at 14hrs., Gottingen; in December, at 4hrs. That of the temperature, except for December, at 10hrs., and in that month two hours earlier.

The maximum pressure of the barometer, except in August, is at 16hrs., and in that month, at 14hrs. The minima occur at different hours in all the months.

Mr. Townsend, from the committee appointed to examine Mr. Castelnau's collections, reported, that they found the collection enclosed in four large wooden boxes, marked 2, 4, 5, 6, respec-

tively, firmly secured, but not otherwise well protected from moisture.

Box No. 2, contained twelve boxes (six of paper and six of wood) of insects in good condition, mould excepted; twenty-four boxes (two of paper and twenty-two of wood) of insects, in bad condition; and a lot of plants.

Box No. 4, contained ten boxes of insects (three of paper, and seven of wood) in good condition, mould excepted; four boxes MSS., prints, &c., &c.; one box of shells; two boxes containing Histoire Naturelle et Iconographie des Insectes Coléoptéres; seventy-five boxes of insects, in very bad order; and two cases of fishes, (skins stuffed.)

Box No. 5, contained twenty boxes of insects in good order, mould excepted, and forty-eight boxes of insects, in bad order.

Box No. 6, contained ninety-nine boxes of insects, in good order, mould excepted, and seventy-seven boxes of insects, in bad order.

Making in all three hundred and sixty-five boxes of insects, containing probably upwards of sixty thousand specimens, four boxes manuscripts, prints, &c., two boxes books, two cases of fishes, one box of shells, and one lot of botanical specimens. Of the insects, one hundred and forty-one boxes were in tolerable order, except mouldiness, which was found to a greater or less extent in all; the two cases of fishes consisted of a few prepared skins; the manuscripts, &c., &c., were chiefly private letters, catalogues, &c.; the shells were few and unimportant; the botanical collection had suffered from moisture, &c., &c.

On motion of Colonel Abert, it was

Resolved, That the Institution employ some person to examine and arrange the above collection, and to take the necessary measures for its preservation.

Mr. Dayton, from the committee appointed to confer with Mr. Espy, on the subject of his theory of storms, &c., offered the following resolution:

Resolved, That the committee appointed to correspond with the Departments of the Government, in relation to the objects of the Institution, be instructed to communicate with the Secretaries of War, and of the Navy, in reference to a more extended, systematic, and

accurate observation of meteorological phenomena at the several military and naval posts, and that they report their proceedings at the next regular meeting of the Institution.

Mr. Bulfinch, from the committee, made a report upon Mr. D'Arcy A. French's communication on grammar.

Mr. Lawrence reported upon the Treasurer's accounts for the year 1841.

Mr. Greenhow, from the Department of Astronomy and Natural Philosophy, reported:

That the Department recommends for publication in the transactions of the Society, the Meteorological Journal kept at the Observatory in Washington, by Lieut. Gilliss, for the months of September, October, and November, 1841; as, also the list of the observations of the mean declination of the magnetic needle, and the heights of the thermometer, and barometer, for each of the magnetic hours during July, August, September, October, November, and December, 1840, as observed by Lieut. Gilliss, at the observatory in Washington.

That the Department having examined the letter addressed to the Institution, by Mr. J. H. Belcher, on the 10th January, 1842, and the accompanying memorial, "calling the attention of the Members of the House of Representatives of the 27th Congress to the great importance of a precise determination of the longitudes of the principal stations and posts in the United States," and recommending that Congress should order at a moderate expense, "the collection, reduction and general discussion of the observations now available for that purpose," reports:

That although it fully concurs with the letter and memorial, as to the importance of having the longitudes of the principal cities, naval stations, and posts, in the United States accurately determined, it nevertheless conceives that any measures on the part of the Institution for the attainment of that object in the manner proposed by the letter and memorial, would be premature, inasmuch as observations have been and are now being made in different parts of the United States, under the direction of the Navy Department, in connection with those also in progress by the officers and others in the squadron engaged in exploring the Pacific and Southern oceans, from all which observations, after they shall have been brought together, computations will be made, and the results published under the auspices of the Navy Department. These results will then be compared with each other, and with those obtained at the principal observatories in Europe, and there can be no doubt that the differences in longitude between the various points of observation on both sides of our continent, and in Europe, will be thus determined with much accuracy.

Mr. Greenhow, from the same Department, made a report on Professor W. H. C. Bartlett's paper on Observatories.

Mr. Markoe made the following report on the subject of Exchanges:

The committee, consisting of Col. Abert, Mr. Markoe, Mr. Dayton, and Dr. King, appointed under a resolution passed at the stated meeting of the National Institution on the 13th December, 1841, which is in the following words:

Resolved, That a committee of four members be appointed by the Chair to examine the subject of Exchanges, to propose a plan for that purpose, and to report fully thereon to the Institution for its further consideration and action,

Beg leave, in pursuance of the directions of the said resolution, to report—

That the duty devolved on the committee by the resolution, is, First to examine the subject of exchanges; second, to propose a plan of exchanges; and, third, to report thereon to the Institution. In reference to the first point, viz: "the examination of the subject," the committee state, that they have examined the subject, and that the result has been a full conviction of mind that a system of exchanges is of very great importance in the accomplishment of one of the primary objects for which the National Institution has been declared to be formed, viz: "the establishment of a National Museum of Natural History," &c., &c. Exchanges enter essentially into the plan of every society constituted as the National Institution, and having like objects in view; and no occasion has been omitted to acquaint societies and individuals, whose correspondence has been sought by or offered to the National Institution, that a system of general exchanges would be entered upon as soon as the Institution should be able to mature a plan for that purpose. Under this assurance, and independently of it also, it should be added, valuable collections of various kinds have already been received by the Institution, which is thus already placed in a position which makes it incumbent on us to redeem the pledge that has been given. The committee consider it superfluous to dwell upon the advantages of exchanges; but they wish the members to know that for this object they have already in hands the most abundant materials—materials which are increasing and will continue to increase every day. These materials consist of contributions made by members, by individuals who are not members, by societies and institutions at home and abroad, and by foreign Governments, as well as of those accessions that have been made by the Exploring Expedition, which has already sent home an inexhaustible quantity and variety of duplicates. It is well known to the Institution that the collections received from all these sources are equally and absolutely the property of the Government, and that therefore the permission of the Government is indispensable to enable the Institution to part with the duplicates derived from all these sources. This permission, it is believed, will be cheerfully accorded. At the same time the committee, for obvious reasons, do not think it proper to ask the Government to allow the Institution to part with any of the duplicates of the Exploring Expedition, until the squadron shall have returned.

In reference to the second point, viz: a plan of exchanges, the committee do not feel called upon or competent to enter into details. These must be left in a good degree to those whom the Institution may see fit to charge with the execution of the plan, in which of course they will be governed by the practice of other Institutions, and by such regulations as it may become expedient to adopt from time to time to suit our own convenience and peculiar circumstances. Here, however, on the threshold of the plan which the committee mean to propose, they regard it of consequence to suggest for the sanction of the Institution, that in exchanges of all kinds, the natural productions of our country shall first and always have a decided preference. A

great and leading design of the National Institution is to explore and develop our own resources, and to study and describe the natural history of the United States. To this end our exertions must principally be directed. It should be the pride of all connected with or interested in a *National* Institution, to see every State in the Union fully represented in a National Cabinet, established at the seat of Government. This method, while it recommends itself to us and our interests, is calculated to extend benefits and encouragement to the societies and naturalists of our own country, who will thus have a central depository, from which they may enlarge and vary their own collections; and thus, also, in due time, the duplicates of the Exploring Expedition may, with the greatest advantage, be diffused throughout the land, thereby fulfilling, in the amplest manner, the intentions of those who projected, and justifying the liberality of the Government which sanctioned that noble project.

With these preliminary remarks, and under the restrictions which are embraced in them, the committee recommend—

1st. That a system of exchanges be entered upon without delay.

2d. That the Curator and assistants be directed, for this purpose, to separate all duplicates, except those from the Exploring Expedition; and that they select and label such specimens as are to be sent to individuals or societies.

3d. That the first step taken be to discharge the obligations of exchange already incurred by the Institution.

4th. That a committee be appointed, to whom the Curator shall submit all sets of specimens thus set aside for any given exchanges, who shall decide upon the equivalency, before said specimens shall be boxed up and sent off.

5th. That in all cases of difficulty which may arise, reference must be made to the President or Vice-President of the Institution for decision, who will, if they conceive it necessary, submit the question to the Institution.

6th. That a book be kept by the Curator, subject at all times to the inspection of the committee, in which must be noted the contents of each box or package; lists of the articles for which they are the equivalents; the name and place of the society or individual to whom one set is to be sent, and from whom the other has been received.

In what the committee have now submitted, they conceive they have done all that it was possible or necessary to do at present, in reference to the third point of the resolution, viz: "reporting fully on the subject;" although they are perfectly sensible that in their report they have presented the subject in the most general manner, believing that experience and practice alone will enable the Institution gradually to settle upon a complete system. The committee beg leave to add, that the present report is not to be regarded as final, but that it is submitted, with all due deference to the Institution, to use the concluding words of the resolution, "for its further consideration and action."

COMMUNICATIONS TO THE INSTITUTION.

ON THE PRACTICAL DETERMINATION OF THE HEATING POWER OF FUEL: BY WALTER R. JOHNSON.

In the progress of improvements in arts, navigation, and the application of heat to domestic purposes, questions of great interest present themselves for experimental determination.

The new era in our Naval history which is about to commence with the introduction of war steamers, is a very suitable period to inquire into the relative values of those varieties of fuel which may be found available for the purposes of steam navigation.

In various parts of the United States are found combustibles adapted to this purpose; but as yet their relative values, either as compared with each other or with the foreign mineral fuel so much used at present, have been but partially determined.

In a work recently published relating to the use of anthracite in the manufacture of iron, I have given several tables of experiments conducted by different individuals, exhibiting the results of trials on a few varieties of anthracite and bituminous coals. The same work also contains a synopsis of what has been done in Europe towards determining this important question of the relative values of coals for the production of steam.

It is proposed in this communication to present to the National Institution some few general results, to which the details contained in the above mentioned work appear to lead, and also to embrace a comparison with other results obtained with the same kinds of fuel.

It may not be amiss to state that the method of determining the relative value of combustibles for the purpose of generating steam, consists in ascertaining the weight of water which can be converted into vapor by the combustion of a given weight of each variety of fuel.

The method which has been often heretofore pursued, consisted in ascertaining the amount of the ultimate constituents of fuel, carbon, hydrogen, and oxygen, and computing the quantity of oxygen required to enter into combination in order to effect their complete combustion. Assuming that the quantity of heat afforded was directly proportionate to the quantity of oxygen consumed, the calculation of relative heating powers was made upon the admission, that the heating power of pure carbon had been determined, and that the power of other combustibles would be proportionate to the several quantities of oxygen which they would absorb.

The experiments of Lavoisier, and more recently those of Despretz, have been relied on to give the heating power of pure charcoal. The latter fixed the quantity of water evaporated by the combustion of one pound of pure charcoal, obtained by

the distillation of sugar at 12.3 pounds, taking the water at 32°, which is equivalent to 14.45 pounds, at the temperature of 212°.

The experiments of Richardson and those of Regnault on coals, and the analysis of wood by Peterson and Shoedlen, have all had in view the determination by this theoretical means of the heating power of the several combustibles.

Ingenious as this method certainly is, it has failed to give results which could be, generally, reproduced when a practical application was sought to be made of the information thus acquired. The practical commonly fell short of the calculated efficiency of fuel.

In the practical determination of the value of fuel, the kind of evaporating vessel, the due regulation of the fire, the nature and condition of the products of combustion, the temperature of water used, and that of the air which supplies the grate, are all circumstances to be attentively considered. The hygrometin state of the fuel itself also deserves notice.

From the tables in the treatise above referred to, from page 129 to page 142, are derived the following comparisons of results, deduced from the experiments of Dr. Samuel L. Dana, of Lowell, Massachusetts.

1. *In plain Cylindrical Boilers, twenty feet long, thirty inches in diameter.*

Sydney coarse bituminous coal, 7.18, 208 pounds per hour burned.
Philadelphia pea coal, 8.60, 180 pounds per hour, on an average.
Philadelphia pea coal, mean of 10 days running, 9.48, 100 pounds per hour burned.

2. *In Cylindrical Boilers, twenty feet long, forty-five inches in diameter.*

Coarse Sydney anthracite, 6.04, 300 pounds burned per hour.
Anthracite dust ½, Sydney slack ½, 7.40, 233 pounds burned per hour.
Anthracite dust ⅔, Sydney bituminous slack ⅓, 7.51, 228⅓ pounds burned per hour.
Best peach mountain anthracite, 8.00, 243 pounds burned per hour.
Peach mountain anthracite, 8.43, 240½ pounds burned per hour.
Beaver meadow anthracite, 8.89, 196 pounds burned per hour.
Coarse Lackawanna anthracite, 9.17, 249 pounds burned per hour.

3. *In three Cylindrical Boilers, thirty-six feet long, twenty-four inches in diameter.*

Anthracite, coarse, 10.60, 179 pounds burned per hour.
Anthracite, coarse, 11.59, 151 pounds burned per hour.

4. *In four Cylindrical Boilers set on Mr. A. A. Hayes's plan, each twenty feet long and twenty-four inches in diameter.*

Sydney coal, screened from dust, 5.83, 250 pounds burned per hour.
Sydney slack alone, 8.64, 148⅓ pounds burned per hour.
Philadelphia pea coal alone, 9.06, 117 pounds burned per hour.
Boston anthracite coal ¾, Sydney slack ¼, 9.60, 108 pounds burned per hour.
Lackawanna nut anthracite, 9.77, 106 pounds burned per hour.
Anthracite coal 3 parts, Sydney slack 1 part, 10.24, 144.5 pounds burned per hour.
Lackawanna egg, 10.28, 147.3 pounds burned per hour.
Anthracite dust ½, Sydney slack ½, 11.13, 112.5 pounds burned per hour.
Anthracite dust ¾, Sydney slack ¼, 11.36, 67.4 pounds burned per hour.
Anthracite dust ½, Sydney slack ½, 11.37, 107 pounds burned per hour.

Philadelphia pea coal ¾, Sydney slack ¼, 11.48, 100 pounds burned per hour.
Lackawanna egg anthracite, 11.55, 109 pounds burned per hour.
Anthracite dust ½, Sydney slack ½, 12.52, 87½ pounds burned per hour.

5. *In a tubular Boiler, thirty-six feet long, twelve tubes, each three inches in diameter.*

Coarse Lackawanna anthracite, 11.96, 85.8 pounds burned per hour.

6. *In a Cornish Boiler of the usual construction, thirty-six feet long, six feet exterior, and three feet ten inches interior diameter.*

Coarse Sydney bituminous coal, 6.32, 233⅓ pounds burned per hour.
Coarse Lackawanna anthracite, 7.75, 155.4 pounds burned per hour.

7. *In an improved Cornish Boiler, with three interior boilers inserted in the interior Flue.*

Coarse anthracite, kind uncertain, 10.90, 171.6 pounds burned per hour.
Pea anthracite 3 parts, bituminous slack 1 part, 12.08, 136.6 pounds burned per hour.
Lackawanna anthracite, ordinary size, 12.98, 145 pounds burned per hour.
Beaver meadow anthracite, ordinary size, 13.41, 122 pounds burned per hour.

The following results have been obtained in this country, in a Locomotive boiler of the common form:

Schuylkill anthracite, 9.51, 57.3 pounds burned per hour.
Wood, 4.71, 112.6 pounds burned per hour.

Mr. Thomas Wicksteed has published a set of results obtained in Cornish boilers, using various sorts of fuel, which I have reduced to the standard of 212°, to render them comparable with the preceding and following sets. Unfortunately they have not come to hand with the rates of combustion annexed; but they may be arranged in the following order:

Blythe Maine Northumberland bituminous coal, 7.44.
Derbyshire bituminous coal, 7.64.
Large New-Castle coal, average 8.64.
Derbyshire ½, small New-Castle ½, 8.69.
Welsh ½, New-Castle ½, 8.86.
Gas coke ½, small New-Castle ½, 8.91.
Gas coke alone, 8.92.
Average Welsh, 8.98.
Average small New-Castle, 9.01.
Best small New-Castle, 9.38.
Anthracite, 10.17.
Best Welsh coal, 10.71.

In the work on Anthracite Iron, above mentioned, will be found at page 149, the following table of the evaporative powers of different kinds of fuel, as given by experience in different forms of boilers.

1. *In a Locomotive Boiler.*

Bituminous coal, by N. Wood's experiments, 5.12.
Coke, by Pambour's trial, 7.12.

2. *In Wagon Boilers.*

New-Castle bituminous coal, by Watts's trials, 9.63.
Bituminous coal, variety uncertain, 8 sets of experiments, 8.76.
Bituminous coal, Parke's experiments for six months, 10.28.

3. *In Cornish Boilers.*

Welsh coal, trial by Henwood, 11.62.
Welsh coal, experiments cited by Henwood, 11.78.

4. *In a Marine Boiler on board the Steamer African.*

Heaton bituminous coal, 8.15.

5. *In four Cylindrical Boilers on Hayes's plan.*

Anthracite ¾, bituminous dust ¼, 11.83.

6. *In a plain High Pressure Boiler.*

Scotch bituminous coal, by Pigfe, 7.74.
Anthracite, kind uncertain, 10.10.

7. *In Player's Boiler for using Anthracite.*

Anthracite, by Schaufbautl's trials, 12.40.
Anthracite by Parke's and Mauley's trials, 13.25.

8. *In Dana's improved Cornish Boilers, newly altered.*

Anthracite of Beaver meadow, 15.56.
Anthracite of Beaver meadow, maximum of Dr. Dana's results, 16.64.

Though important general conclusions can be derived from the foregoing facts, yet, as several circumstances highly necessary to render the results comparable, have been very various in the several experiments, it is evident that we yet want an extensive series of operations on the several varieties, made in a manner which shall render them true indices of the heating powers of the several kinds of coal.

PLAN OF EXCHANGES SUBMITTED BY DR. E. FOREMAN, OF BALTIMORE.

The subject of exchanging specimens of natural history having been already forced upon the attention of the National Institution, I take the liberty to submit a few considerations, being the outlines of a plan which I have found to yield profitable results in my own practice. The necessity of repaying those naturalists who have contributed native or other species to the cabinet is obvious, and equally so the advantages to be derived by distributing the great numbers of the same species, which the Institution has accumulated and will continue to accumulate. Having studied the subject of conchology for a few years, in a private way, in the leisure time afforded by a long college summer vacation, and acting under the desire and for the purpose of enlarging my collections, I adopted a system by which I believe that the expenditure of time, money, and exertion, will yield the greatest results.

The singular tribes of animals studied by the conchologist, are known to be extensively spread over every part of the globe visited by man, and that they likewise affect some situations in greater numbers, size, and variety of species, than others. In those countries whose zoology has been more fully explored than our own, as France, Germany, and England, it has been ascertained that *soil* and *climate* are the two great causes which modify their distribution. In reference to the first cause, limestone rocks and the superincumbent soil seem to be more favorable than any others, to the number and propagation of species. The next more favorable are the sandstones; basalt, granite, argillaceous, and slaty rocks, generally exercising a negative or unfavorable influence. The latter cause, climate, produces an unquestionable diminution in the number, size, and variety of species, bearing a general proportion to the lowness of the temperature, since, as we advance northward, many species disappear altogether. In temperate situations, individual species multiply to greater extent, and in warm districts they display a greater superiority in respect to color. Sheltered vallies, places of low elevation, with a southern exposure and a proximity to the sea-coast, afford the greatest advantages for the propagation of these tribes.

Guided by these or similar views, the surface of the United States may be divided into a number of regions or districts, for the purpose of collecting its shells, and from each, as the soil or climate varies, we must expect to receive suites of specimens differing widely from each other. That we may assign some general limits to these portions of country, it will be necessary, first, to sketch out a few grand divisions, to be subdivided afterwards. If we travel, for instance, from the Atlantic ocean towards the great lakes, there will successively occur several marked lines or belts of country where the species must be changed to suit the soil, climate, elevation, temperature, and the salt or fresh condition of the water. In the sea, there will be found, and there may be dredged from the sub-merged coast, such as are peculiar to the sea, and may be designated as marine species. At the mouths of rivers and estuaries, and in the brackish water, which extends as far inland as the tide flows, another suite of species, peculiar to this combination of circumstances, will be detected. Beyond the point of high tide the water remains fresh, and here are found those which are known and designated as fluviatile species. Of the terrestrial species, a diversity equally striking may be noticed, by returning to the edge of the ocean, collecting all the species inhabiting the low flat lands, composed of sandy and clayey soil, extending, for the most part, along the whole coast of the United States. Compare these with such as inhabit the sides and summits of the low ranges of hills or terraces constituting the head of tide, and a striking difference will be at once perceived. These again are, in many respects, dissimilar from those living on the broad belt of the tertiary formations, which stretch along the base of the eastern slope of the primary Atlantic chain of mountains. Upon the sides and summits of these, again we discover new genera and species; and we notice, with surprise, that those which abound on the eastern slope, in but few cases cross over the ridge to the other or western aspect of the same chain. The most remarkable difference takes place, however, in the fresh water bivalves, especially of the genus unio, which becomes suddenly changed, from an elongated form and very thin shell, to swarms of new species, of great size, endless variety of form, and of astonishing thickness. These characteristics are maintained through-

out the entire valley of the Mississippi. By pursuing our course still farther, we eventually come to a new zoological district, where great bodies of fresh water expand themselves like inland seas, inhabited, in many respects, by a different suite of species, and this may be known as the lake region.

To effect a subdivision of these broad ranges of territory, we may cross them by any number of parallel lines, equidistant, as the parallels of latitude, and thus, in a rough way, assign the boundary to each smaller district. A great number of localities, whose natural history it were desirable fully to explore, will be created, and collections made within their limits will exhibit great dissimilarity of species, and frequently of entire genera.

But in the unsettled, and, so far as science is concerned, the uncivilized state of many of the indicated regions, it were impracticable entirely to accomplish so desirable an end; for it would be a long time before an individual, disposed to collect and exchange species, could be found in each, and be placed in correspondence with the National Institution; and in its recent state, its duplicates, although exceedingly abundant, would scarcely afford a supply to so great a number. I have arranged the surface of the territory of the United States into these numerous portions, only to show that collections must be made from all of them, if we wish to possess complete suites of its shells.

As an illustration of these principles, applied to practice, I established a correspondence with gentlemen in the various cities and towns on the Atlantic coast, to wit: St. John's, New-Brunswick; Portland, Maine; Boston, Massachusetts; a point a few miles north of Chesapeake Bay; Charleston, South-Carolina; Savannah, Georgia; and Mobile, Alabama. I proposed to accomplish, by this method, a collection of our coast shells, and have mainly succeeded. But it will strike every one who runs his eye along a map of the coast, that there are, by this enumeration, great gaps left unfilled. I have no station on Long-Island or the Jersey coast; both sides of the peninsula of Florida are unrepresented; and it were desirable to have collections from the mouths of the Mississippi. For the interior, I have selected, at the head of tide, corresponding points to the above; likewise in the valley of the Mississippi, and others on the Ohio, Cumberland, and Tennessee rivers.

My experience leads me to believe that the species native to this country will be more acceptable, generally, to intelligent correspondents, than such as may be procured from foreign voyages, unless the latter be very rare, and in fine preservation.

I have uniformly preferred holding correspondence with teachers or professors in various colleges, or with professional men, who, by their position in society, are above the reach of the invariable *cui bono* interrogatory; since many well-meaning persons hold the study of these portions of science, without regard to their direct or indirect utility, in great contempt, and this deters many private persons from their pursuit. Such correspondents likewise command an influence over many persons in their respective districts, and are enabled to draw from all quarters, by a little exertion, large supplies of various new and old species. Another advantage still is found in procuring immediate and full returns from such, as, for the most part, they have access to either public or private cabinets, *know how* to collect in the field, and no time is lost in the process of initiation, which ordinarily occupies one or two seasons before the haunts of all the species become familiar.

In adopting this system and setting it to work in a thinly populated country, in

which, for the most part, reliance must be placed on uninformed agents, it will be absolutely necessary to issue very minute instructions, to be observed by the collector, that they may, with the least expenditure of time, do the best possible with the country they live in. More especially every inducement should be held out to all correspondents to send in wet preparations of the animals which occupy the shells, and dissection of parts, illustrative of their anatomy, preserved in spirits.

If the National Institution could succeed in establishing branch institutions in the various quarters indicated above, a measure which I would urge upon the early attention of the members, the harvest of species waiting to be gathered in would be accomplished so much the more speedily.

Respecting the willingness of gentlemen, especially those to whom I have referred, to undertake exchanges, I take this opportunity to bear testimony to the great liberality and promptitude which I have invariably found to actuate naturalists, though personally strangers to each other. I have attributed these noble qualities as much to the gentle influences exercised by their quiet pursuits, as the wish to extend the humanizing results which always attend the cultivation of science.

WASHINGTON UNIVERSITY OF BALTIMORE, *Dec.* 10, 1841.

OBSERVATIONS ON A PORTION OF THE ATLANTIC TERTIARY REGION, WITH A DESCRIPTION OF NEW SPECIES OF ORGANIC REMAINS: BY T. A. CONRAD.

Several circumstances combine to give interest and importance to the tertiary deposits of the Atlantic coast of the Union. These chiefly consist in variations from the usual characteristics of European tertiaries. The first which I shall notice is the remarkable connection of secondary with tertiary, or cretaceous with eocene deposits, by means of the following fossils, which I discovered in a tour in the Southern States in 1832, '33 viz: *Nummulites Mantelli*, (nob;) *Gryphæa vomer*, (Morton;) *Plagiostoma dumosum*, (Morton.) The white limestone of Alabama, which contains these fossils, is connected with the green-sand formation of New-Jersey, by three species of shells: *Ostrea panda*, *Ostrea cretacea*, and *Gryphæa vomer*, (*Ostrea lateralis*, Nillson.) The second important disagreement with foreign tertiaries is the absence of any trace of fluviatile remains. The *Gnathodon*, a bivalve inhabiting estuaries where the water is scarcely saline, and fresh during the inundations of the rivers, is the only evidence, hitherto obtained, of the occurrence of fresh water streams—a remarkable fact, considering the great extent of land which evidently was present in the tertiary periods. The third peculiarity of the American tertiaries is the abrupt line of demarcation between the fossil groups which they contain; showing no gradual passage or interchange of forms, although the relative levels, above the sea, are of no important variation among the three divisions into which I have grouped the tertiaries, for a convenient but temporary purpose. No one, I presume, would refer this wide difference of zoological character to any relative condition of sea or land, caused by earthquakes, or by an elevation of the beds above

the level of the sea; and, therefore, the only cause which presents itself to the mind of the inquirer is, a fall of temperature in the ocean, sufficient, at the close of the lower tertiary period, to have destroyed every kind of animal life, at least on the coast of North-America, because of two hundred species of the lower tertiary, not one exists on the coast, nor is found in the more recent formations of the Union.

The lower tertiary is certainly identical with the London clay and calcaire grossiere, or eocene formation; and I was led to the comparison, in the first place, by discovering the *Cardita planicosta*, a well-known characteristic fossil of the eocene period in Europe.* A single species of shell will thus occasionally indicate the stratagraphical relations of a formation hitherto obscure or unknown, and lead to inferences the most important, which he who underrates organic remains is apt to regard as visionary, but the palæontologist must acknowledge as useful and true.

At Upper Marlborough, Prince George's county, Maryland, and at other localities in Maryland and Virginia, green-sand, the same in mineral character with that of the cretaceous period, enters largely into the composition of the lower tertiary marls. In Georgia, and more rarely in Alabama, a portion of this formation assumes the character of burr stone, and the shells which abound in it are beautifully silicified. Near Piscataway and Upper Marlborough, the lower tertiary is somewhat similar, in general appearance, to the Bognor rocks of Great Britain, but of a coarser and more arenaceous texture. What is of more consequence, however, is the occurrence of a bivalve shell, characteristic of the Bognor rocks and of the eocene period—*Ostrea bellovacina*. This stratum is indurated, and overlies the eocene green-sand, but is evidently linked with it by a communion of zoological characters, at the same time that it contains a few species which appear to be peculiar to it. *Panopæa elongata* is the most abundant fossil, and a new Pholas, (*P. Petrosa*,) and a Pholadomya, (*P. Maryland ica*,) I have met with only in this rock. Several other shells, which it holds, are identical with species of the lower tertiary at Claiborne, Alabama. The most interesting shell is Gryphæa vomer, (*Ostrea lateralis*, Nilsson,) which originated in the lower division of the cretaceous system, was continued in the two upper terms, and reappears in the tertiary sandstone at Upper Marlborough in abundance, although no other fossil whatever, of the cretaceous group, has been found in that locality.

In company with my friend Francis Markoe, Jr., of Washington, I reëxamined the interesting deposits at Upper Marlborough, and was surprised to find the secondary species of Gryphæa scattered in abundance over the surface of the disintegrating rock, in company with the characteristic group of the eocene; for, on a former visit to this place, the shell was so rare that I supposed it to be accidental, or part of the ruins of an earlier era. The valves were never found united; but this is seldom the case in the New-Jersey green-sand deposits, where it is numerous. Although the lower valve is always more or less broken, the fracture has resulted from the fragility of the shell, in falling, through the agency of frost and rain, from the disintegrated rock. The upper valve is almost always entire, and neither is ever seen to be water-worn in the slightest degree. These considerations lead to the inference that the bivalve in question may have existed in the eocene period, constituting another link in the important chain of connection between the secondary

* Journal of the Academy of Natural Sciences of Philadelphia, 1830.

and tertiary formations of the United States. The species evidently existed in the newest of the cretaceous rocks, which contains two other tertiary fossils.

If it can be proved that no species of the secondary period was drifted by currents into the eocene ocean, it is not unlikely that the green grains of silicate of iron, which are probably of volcanic origin, were formed as well in the tertiary as the cretaceous epoch. Indeed, in many localities of the former period, in Maryland and Virginia, the green-sand is quite as abundant as in the secondary fossiliferous "marls" of New-Jersey.

The only localities of the lower tertiary which I have visited in Maryland, are at Upper Marlborough, Piscataway, and Fort Washington. It sinks beneath the medial tertiary beds, shortly after passing a line from the fort to Annapolis. Dr. Ducatel has detected it on the Potomac, opposite Crane Island, in Charles county. We know not any other locality southeast of this. The inclination of the tertiaries in Maryland is very slight, and towards the southeast; so that the Potomac, below Washington, presents sections of each of the three divisions. The same group of organic remains occurs throughout the lower tertiary, with little variation in species compared with the upper divisions. The lowest bed consists of green and siliceous sands, mixed with clay, in which the fossils are chalky, and fall to pieces with the slightest pressure. The upper stratum is of a coarse arenaceous texture, with green grains, and quite indurated in masses, which fall out as the other portions of the rock become disintegrated by frost. Here we observe many of the shells perfectly preserved in silex, which has completely replaced the calcareous matter, whilst others, as *Panopea elongata*, *Cucullæa gigantea*, *&c.*, frequently consist of casts, with only a thin coating of the chalky calcareous matter of the original shells. *Pectunculus pulvinatus*, the variety described and figured by Deshayes, a very characteristic shell of the Paris eocene, is the most common of the silicified bivalves, standing in bold relief on the surfaces of the indurated masses. *Cardita Blandingi* is rare, and much smaller than the same species which occurs so abundantly in the sand at Claiborne, Alabama. The large *Cucullæa gigantea* abounds in the vicinity of Fort Washington; but in the synchronous deposits of Piscataway and Upper Marlborough, it does not occur. Of course some variation in the group of species will be observed in every different locality; but it is far less in amount in the lower than in the newer tertiaries. There is also great difference in size among some species, when compared from different localities. *Cardita planicosta* is much larger in Maryland than in the sand at Claiborne; and *Turritelli Mortoni*, of Maryland, is gigantic in comparison with the largest specimens at Claiborne.

The lower tertiary occurs on James river, near City Point, Virginia; a most interesting locality, from the juxtaposition of this formation with the medial tertiary, in which the organic remains of both are brought almost into contact, and yet not one species of any class of fossils is common to both. Here the remarkable oyster, *O. sellæformis*, separates the group of oceanic lower tertiary shells from those of the medial tertiary. At Claiborne, this *Ostrea* divides the eocene oceanic beds by an interval of seventy feet. This shell connects the white limestone of Vance's ferry, Nelson's ferry, and the Eutaw springs, South-Carolina,* with the eocene of

* In 1832, I found abundance of *Ostrea sellæformis* at Nelson's ferry, on the Santee river, but associ-

Alabama, and is, perhaps, the most unvarying and curious in shape, and certainly one of the most easily recognised of the irregular forms of this difficult genus. It has a most important claim to the attention of the speculative geologist, for, like the *lithodomus* marks on the pillars of the temple of Serapis, I conceive that it affords evidence of a rising above and sinking beneath the level of the sea, of the lower tertiary beds of Alabama. Wherever we find a continuous deposit of fossil oyster-shells, we recognise an ancient estuary, bay, or lagoon, cut off from the main ocean; for in no geological period were these bivalves ever colonized in the open sea, although they were liable to have been occasionally drifted there by currents. To present a clear view of the subject, I subjoin a section of the cliff at Claiborne, with a description, originally published in the Journal of the Academy of Natural Sciences of Philadelphia, in 1834, and in my work on tertiary fossils, in 1835. The section is in the ascending order.

	Right bank of Alabama river at Claiborne.	
4	Argillaceous limestone,	45 feet.
	- indurated,	3 feet.
3	Group of shells, similar to those of the Paris eocene,	17 feet.
	Ostrea sellæformis, in indurated sand,	3 feet.
2	Dark colored clay, with Ostrea sellæformis,	70 feet.
1	Sand and clay, with oceanic shells, same as in No. 3.	

Level of the Alabama river, in the lowest stage of the water.

1. The inferior stratum is a dark-colored mixture of sand and clay, containing a group of shells, many of the species of which occur in the arenaceous deposit, No. 3 of the section.

2. A dark-colored clay or marl, seventy feet in thickness, characterized by *Ostrea sellæformis*, generally of a small size, with disunited valves, and rather sparsely

ated with a different group of fossils from any I had observed in Alabama. In Dr. Morton's "Synopsis of the Organic Remains of the Cretaceous Group," the white limestone, in which this oyster shell occurs, was referred to the upper division of this group; but further investigation of the fossils has satisfied me that they are of eocene origin. Two species of organic remains which occur in the limestone, (*Scutella Lyelli* and *Pecten calvatus*,) I have obtained from the newest stratum at Claiborne, No. 4 of the section; but this Carolina limestone I believe to have been deposited in estuaries, like stratum No. 2, of the Claiborne section, with which it is doubtless of precisely the same geological age. Dr. Blanding, many years since, presented me specimens of *Ostrea sellæformis* and *Cardita Blandingi*, which he found at Vance's ferry, on the Santee river, and which enabled me to connect the formation of that locality with the eocene of Alabama. The following is a list of the fossils which I found in 1832, in the different localities of lower tertiary limestone in South-Carolina: Conus gyratus, Olivia carolinensis, Cypræa lapidosa, Ostrea sellæformis, Pecten calvatus, P. membranosus, Terebratula lachryma, Balanus peregrinus, Scutella Lyelli, Lunulites Lyellii L. carolinensis, Echinus infulatus, Anthophyllum cuneiformis

distributed. Other fossils are very rare. I found a specimen of *Plagiostoma dumosum* (Morton) attached to an oyster-shell, which appears to be the only evidence of the existence of that extinct genus in a tertiary deposit. Overlying this stratum is abundance of the same *Ostreæ*, in about three feet thickness of sand, cemented by carbonate of lime. Large specimens generally have a water-worn appearance, and occur mostly in single valves; but I found a few whole, unworn, very perfect shells. The young, which are vastly abundant, are also free from any marks of attrition, but are almost universally with disunited valves.

3. The next in order is a stratum of incoherent sand, of a ferruginous color, consisting of angular grains of quartz, and crowded with shells, in a fine state of preservation, which, though friable, may nearly all be obtained entire, by taking time and great care in collecting them. Here are about seventy genera, and rather more than two hundred species of organic remains. Those bivalves which have a strong ligament, as the *Lucinæ* and larger *Crassatellæ*, generally have the valves in apposition and the cartilage still remaining. The *Cytherea æquorea*, which resembles *C. suberycinoides*, (Deshayes,) the most abundant fossil at Claiborne, very seldom has the valves in connection; but if there has been any disturbance, at the time of deposition, it has been insufficient to injure the most delicate angles and striæ of the shells. Occasionally, specimens are found which still retain their colored markings. The surface of this stratum, where a portion of the sand has been washed away by rain, presents the aspect of a solid bed of shells. Near the base of it, whatever point was examined, a vein of soft lignite was present, and, what is remarkable, certain fine large univalves appeared almost confined to this lignite, as if it had been formed from vegetable substance, in the eocene ocean, to which these univalves were partial. Beneath this line, the sand is somewhat coherent, and many species of shells are more rare, whilst others are more abundant than above it.*

4. This stratum consists of argillaceous limestone, more or less friable, and about forty-five feet in thickness. It contains a few obscure casts of shells, referable to species imbedded in the sand beneath. *Scutella Lyelli* is the fossil of most frequent occurrence, but is also in great abundance in the sand, whenever that is sufficiently coherent to preserve its form. This rock somewhat resembles the newest member of the cretaceous group, which I found six miles west of the village of Claiborne; but a very dissimilar group of fossils shows the difference in age at a glance; and at St. Stephens, on the Tombeckbee river, the latter passes under the lower tertiary beds, as seen in the precipitous cliff.

At the base of the Claiborne section, we observe such a group of shells as lived only in the open sea. Estuary shells are more rare among them than is usual in marine deposits; for currents setting into the ocean generally carry with them the dead shells of estuaries, which may be frequently observed cast up on the beaches of the present seas. The eocene deposit of the Paris basin contains, it is well known, one hundred and thirty-seven species of the genus *Cerithium*, which clearly indicate the ancient occurrence of an estuary or arm of the sea. Now, in the con-

* In the sand I found the following fossils of the Paris basin: *Solarium patulum*, (Lam.,) *S. canaliculatum*, (Lam.,) *Bonellia terebellata*, *Sigaretus canaliculatus*, (Sow.,) *Calyptræa trochiformis*. (Lam.,) *Pyrula tricarinata*, (Lam.,) *Avicula trigona*, (Lam.,) *Cytherea cryeinoides*, (Lam.,) *Corbis lamellosa*, *Cardita planicosta*, *Fistulana elongata*, *Pectunculus pulvinatus*.

temporaneous deposit at Claiborne, a mere trace of this genus was all I could find during a protracted investigation of the fossils. If we suppose, then, the lowest bed at Claiborne to have been deposited in the ocean, we must infer this to have been elevated until it was cut off by a beach, and thus converted into a lagoon, because the group of oceanic shells was suddenly interrupted, and the *Ostreæ* began to congregate upon them in the land-locked and calm water. These, in their turn, were as suddenly banished by the sinking of the coast, which converted their harbor into the open sea, and restored the oceanic shells to their original position.

Although I believe the rise of land to have been generally by insensible degrees, through the agency of the crystallizing force acting throughout primary or granitic rocks, yet for this sudden interruption of groups from an oceanic to an estuary character, some other explanation seems necessary. Two theories only present any claim to our attention: one is, that a sand bar might have been suddenly formed by a violent tempest, which permanently remained to protect the shells in the lagoon; and the other, and perhaps more probable solution, is, that during an earthquake the land may have been suddenly elevated. The sea was cut off from its original beach by a bar, previously under water at all tides, but now constituting an embankment, which the ocean might never again be destined to pass. Of this conversion of sea into land-locked water, we see proofs every where throughout the three tertiary divisions, but of the conversion of the latter into the former, or sinking of the land, I am acquainted only with the solitary but interesting example at Claiborne. I know not in what estimation others may hold this phenomenon as evidence of the sinking of the land, but to my mind it appears as conclusive as the perforations of *lithodomi* on the columns of the temple at Puzzuoli, so admirably illustrated by Lyell.

Classification of Tertiary Formations.—It is doubtful, in the comparison of tertiary deposits, whether the relative amount of recent and extinct species may not be carried to an extreme injurious to science, especially before all the fossil as well as the recent forms shall be obtained. In the strata above the eocene, especially, is great care requisite in this mode of comparison, as the groups vary so continually in localities separated by an inconsiderable interval, that the fossils of the one shall be nearly or quite all of extinct species, and those of another shall embrace several existing forms. Nor can there be any doubt of the synchronous nature of these deposits, when we refer to the medial tertiary formation, because, taking a general view of the palæontology of the region, it is found to characterize a single era in the clearest and most satisfactory manner. Even when we trace the deposits in their horizontal continuation throughout a long line of coast, like that of the Chesapeake bay, we begin at one extremity, with a certain class of shells, which gradually drop some and acquire other forms, as we proceed towards the opposite termination of the beds, where there will be found scarcely a species in common with those at the spot where we commenced observation. In my first explorations in Maryland, I was greatly surprised to find a group of shells on the Choptank river, near Easton, which scarcely held a fossil in common with the localities I had previously studied on the western Peninsula, yet I could not doubt the contemporaneous origin of all these beds; and I subsequently found nearly the same group on the shore

of the Patuxent, below Benedict. As we trace the strata south, the species found on St. Mary's river, make their appearance, and yet the group of the latter locality compared with that nearest to Benedict, will be found to hold scarcely one kind of fossil in common. I have seen from Italy and Great Britain, organic remains so similar in general character, though mostly of species different from those of the medial tertiary of the Union, that I could not doubt the geological relations to be the same, and hence the inference, that a comparison of tertiary formations in distant countries, will exhibit by peculiarity of forms, and not unfrequently identity of species, the evidence of having originated at the same period of time. According to the classification of formations upon the relative amount of recent and extinct forms, that which we have designated as the medial tertiary formation, comes within the limits of the miocene. Yet, it is singular that a greater amount of difference should exist between the eocene and miocene, or two consecutive divisions of the tertiary, than obtains between secondary and tertiary, or between the devonian and carboniferous systems. No single form connects the lower with the medial tertiary formation, even when they are in juxtaposition; yet three species of organic remains link the upper secondary with the lower tertiary group of this country. It is, therefore, not unlikely that some deposits may yet be found, which occupy a position between the lower and medial tertiary, connected with both by the interchange of a certain number of forms, as is the case in Europe. There may be such a formation, circumscribed within narrow limits, or it may have been swept away in one of those unfathomed revolutions, which have so mysteriously and so frequently passed over the surface of the globe.

The following table will exhibit the most prominent characters of the supracretaceous formations of the Atlantic coast, premising, however, that of the two newest of these, the relative position is yet undetermined.

Table of Atlantic Supracretaceous Deposits.

	Elevation above the sea.			Localities.
Upper Tertiary.	200 feet.	Pleistocene,	Organic remains chiefly of existing species, supposed as a group to show evidence of a lower temperature in the period of their deposition than prevails now in the same parallel; yet most of the species live on the coast of Massachusetts.	Lake Champlain; St. Lawrence river.
	15 feet.	Or	Organic remains, the same as occur recent in the neighboring waters.	Raritan bay; many of the beds of *Ostrea virginiana* in Maryland and Virginia.
	12 feet.	Post-Pliocene.	Organic remains chiefly of recent species, but some of which now exist only in more southern latitudes, as the Gulf of Mexico. The most remarkable of these is *Gnathodon cuncatus*.	Neuse river, below Newbern, N. C.; beds of Gnathodon on Potomac, St. Mary's county, Md.
Medial Tertiary.	100 feet.	Miocene.	Organic remains with about seventeen per cent. of known recent species. No form of the lower tertiary found in this division.	Eastern counties of Maryland, Virginia and N. Carolina.
Lower Tertiary.	200 feet.	Eocene.	Organic remains similar as a group to those of the calcaire grossiere and London clay; many species identical with the eocene fossils of the Paris basin. No recent species.	Claiborne, Al.; Natchez, Mis.; Washita river, La.; Fort Washington, Piscataway, and Upper Marlborough, Maryland.

I have here given a view of all the strata known above the white limestone which prevails so extensively in Southern Alabama and Georgia, and which is evidently a link in the widely distributed cretaceous series. The lower tertiary in the Southern States is generally in limited basins or depressions in this limestone. Although at Claiborne the actual junction or relative position of the two formations is not exhibited, yet the latter rock can be traced, as well as identified by its fossils, from a spot six miles west of Claiborne to St. Stephens on the Tombeckbee river, where it is seen to underlie the lower tertiary strata, a short distance north of the village. The following section, though constructed from recollection after a lapse of seven years, will convey an idea of the cliff at St. Stephens.

St. Stephens.

River Level.

A. Newer cretaceous limestone.
B. Alluvium.
C. Eocene.

I have already indicated those fossils which are common to both formations, but it is not unlikely than another of great importance will yet be added to the number. This is the *Zeuglodon*, or the gigantic *Basilosaurus*, found on the Washita river, in Louisiana, completely enveloped in eocene fossilliferous "marl." It is yet, however, uncertain whether this envelope may not have fallen from the cliff above upon the exposed remains, though their tertiary origin is more probable. In the limestone, specimens of the jaws and teeth, and many vertebræ have been discovered. I received some years since, from Alabama, some of these remains, and the vertebræ were reported to have laid upon the ground when first discovered, in so regular a line, as to suggest the idea of their having been undisturbed from the time of the animal's death. Judging from the extent of this line of vertebræ, the *Zeuglodon* was supposed to have been one hundred and fifty feet in length, which is doubtless a great exaggeration. Portions of nine individuals, it is said, have been found in Alabama.

The following fossils, most of them described by Dr. Morton, constitute the group by which this formation is recognised: *Nummulites Mantelli, Pecten perplanus, P. Poulsoni, Plagiostoma dumosum, Ostrea panda, O. cretacea, Modiola cretacea, Gyphæa vomer, Nautilus alabamensis, Scutella Rogersi.*

The rock is finely developed, and the fossils very numerous, between Claiborne and St. Stephen's, in Alabama, particularly at the latter locality, where myriads of the *Nummulites Mantelli*, (Morton.) cover the surface of the decomposing rock.

Geographical range of Lower Tertiary.—The most northern locality I have seen is near Long Branch, in New-Jersey, where the fossils, though generally casts in marl, with a chalky coating, are very readily identified with the Claiborne species. The localities in Maryland have already been indicated. In Virginia, the formation occurs on the Rappahannock, below Fredericksburg, on the Pamunkey river, and

on the James river, two miles below City Point. In Georgia, in several of the eastern counties, burr stone of the lower tertiary period prevails.* On the Chatahoochie river, near Fort Gaines, is a cliff similar to that at Claiborne. Near Black's Bluff, in Wilcox county, Alabama, at Claiborne and St. Stephen's, are the only localities yet known in that State. In Mississippi, I recognise the formation by fossils from the Walnut Hills and Vicksburg, and there is every reason to believe a portion of the high bank at Natchez belongs to the same geological period. On the Washita river, Louisiana, the formation is well developed, near the town of Monroe; and it has also been discovered in Arkansas on Red river.

Geographical range of the Medial Tertiary.—I discovered many years since a locality of this formation on Stow creek, Cumberland county, New-Jersey, the most northern limit with which we are yet acquainted. In Maryland, it occurs near Chestertown, Wye Mills, on Choptank river near Easton, and other places on the Eastern shore; also, throughout the counties of St. Mary's, Calvert, &c.; and on the Western shore, in Virginia, the counties east of a line drawn from Tappahannock to Murfreesborough, are chiefly of this formation, which continues through North-Carolina, in all the eastern counties. It occurs near the junction of the Congaree and Wateree rivers, in South-Carolina, and this is as far as it has yet been traced south.

Localities of the Upper Tertiary.—The first view of this formation,† which I obtained, was on the Potomac river, a few miles above Point Lookout. Subsequently I discovered another on the Neuse river, below Newbern, in North-Carolina, resting upon the medial tertiary; and on the Potomac, in St. Mary's county, Maryland, is a bed of *Gnathodon* of the same geological age. Many of the deposits of *Ostrea virginiana* found in various places over the medial tertiary strata, are referable to the same period. On the shore of the Chesapeake, below the Patuxent river, is another locality. The same formation underlies the city of Charleston, South-Carolina, and is penetrated by some of the wells. Dr. Emmons has discovered on the borders of Lake Champlain and elsewhere, in the northeastern section of New-York, fossils

* This burr stone was referred by me to the eocene period in 1835, in the "Transactions of the Geological Society of Pennsylvania," vol. ii, page 335, and also the fossilliferous beds of Orangeburg, South-Carolina. The evidence was derived from organic remains collected by Dr. Wm. Blanding and Mr. Vanuxem. Cytherea peronata, a common eocene species at Claiborne, is, perhaps, the most abundant fossil of the burr stone. In my "Fossil Shells of the Tertiary formations of the United States," (1835,) page 31, the following notice of the lower tertiary occurs: "From Vance's ferry, the line of the eocene runs a little to the south of west, and, passing through the town of Orangeburg, crosses Savannah river at Shell Bluff, which is its boundary on the west. This formation appears, at intervals, in a distance of forty miles, following the course of the river." Shell Bluff, according to the observations of Mr. Vanuxem, is seventy feet high, formed of various beds of impure carbonate of lime. The "Ostrea Georgiana," (which I believe to be O. longirostris, a fossil of the eocene near Paris,) is here in a bed, nearly six feet thick, in the upper part. A deposit of the same kind of oyster shells occurs near Milledgeville, in Georgia, accompanied by the Scutella quinquefaria, (Say,) imbedded in white friable limestone. Three parallel ridges of these oyster shells are said to run from the Savannah to the Alatamaha river.

† For description of this locality, and list of fossils, see Journal of the Academy of Natural Sciences, vol. vi, p. 207, 1830.

identical with those of the St. Lawrence river, Sweden and Norway, referred by Mr. Lyell, to the post-pliocene period.

The upper tertiary is divided in the table into three sections, not that I would assert positively that there is much, if any difference in age, but because of the peculiar groups and distribution of species. The lowest section is most unlike the two upper, in consequence of exhibiting a group of shells approximating that living in the Gulf of Mexico, but it must be remembered that some species ranging as far north as Massachusetts, also occur with the fossils, and that probably when these were living in the sea, the peninsula of Florida was yet submerged. This form of the coast would have given the Gulf stream more influence in distributing southern forms far northward along the coast. But some change of climate, at the close of this period, seems not improbable from the circumstance that the common estuary fossil of the Gulf of Mexico, *Gnathodon cuneatus*, of Gray, was banished from the brackish waters of Georgia, South and North-Carolina, Virginia and Maryland, at this geological epoch. This shell lives so far from the sea, in mud flats, exposed at low tide, that it is not likely to have been destroyed by any change in the Gulf stream, or a receding of its imparted temperature from the coast. If this alteration of temperature can be established by new investigations, the deposits can hardly be of the same age as those of Raritan bay and the St. Lawrence river. In the former locality, there is no evidence of the slightest variation of temperature from the historical period, whilst the latter is supposed to contain a group peculiar to higher latitudes. This, however, wants confirmation, since most of the species are known to exist on the coasts of Maine and Massachusetts.

Medial Tertiary Period.

In a recent excursion with my friend Mr. Markoe, I made a hasty examination of some localities in Anne Arundel, Calvert, and St. Mary's counties. Except the lower tertiary at Upper Marlborough, these were chiefly referable to the medial tertiary period. The first point of observation was near Fair Haven, Anne Arundel county, where Mr. Markoe had previously obtained some interesting relics. This is the northern extremity of the formation on the west shore of the Chesapeake; a line run from Fair Haven to a point opposite Crane Island, in the Potomac, dividing the lower from the medial tertiary. At Fair Haven we observe a range of coast about fifty feet in elevation. Valleys of denudation sloping to the shore of the Chesapeake, interrupt the continuity of the bank, which presents a front of isolated perpendicular cliffs at irregular intervals. The lowest bed, which is on a level with the tide, is composed of clay, containing a stratum of Ostrea percrassa, a new Pecten, P. Humphreysii,* and other undetermined shells. This stratum rises to the height of about five feet above the level of the bay. Above is a light-colored clay, containing great numbers of black water-worn siliceous casts of small shells, chiefly Turritella, the species not yet determined. To this succeeds a whitish clay without fossils.

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* Named after Dr. Humphreys, of St. John's College, at Annapolis.

SECTION AT FAIR HAVEN.

Feet in thickness.

	50	Whitish clay.
		Bones of cetacea.
	3	Clay, with siliceous casts of marine shells, and fragments of bones.
Bay. S.	5	Clay, with Ostrea percrassa, Pecten Humphreysii. N.

This locality is interesting from the phenomenon of fissures or vertical joints, similar to those of primary and silurian rocks, traversing the whole strata without interruption, evidently the result of the same general cause which has produced the jointed structure of ancient rocks.

The next point to which our attention was directed, is near Colonel Blake's, on the Chesapeake, about twenty miles south of Fair Haven, where the cliff is at least one hundred and fifty feet high. At base we found a clay replete with a species of Tellina, probably new, and over this, at about six feet elevation, a thin stratum of Ostrea percrassa. The upper portion of the cliff consisted of sand and clay, and appeared to be destitute of organic remains.

A few miles south, upon the bay shore, we came to an interesting ravine on the farm of Captain Hance, a locality I had visited last spring. A small stream has worn a channel in the bank, and exposed beds of a mixture of sand and clay, very incoherent in general, and the fossils extremely numerous, though difficult to procure in the usual state of perfection of medial tertiary shells. The elevation is but a few feet above the level of the bay.

The species obtained here are comprised in the following list: the recent species in *italics:*

Bivalves.

Astarte varians, Conrad.
Astarte exaltata, Conrad.
Artemis acetabulum, Conrad.
Arca subrostrata, Conrad.
Arca depleura, Conrad.
Cytherea subnasuta, Conrad.
Cardium leptopleura, Conrad.
Crassatella melina, Conrad.
Corbula idonea, Conrad.
Corbula elevata, Conrad.

Bivalves.

Isocardia Markoéi, Conrad.
Lima papyria, Conrad.
Lucina Foremani, Conrad.
Lucina subplanata, Conrad
Lucina crenulata, Conrad.
Pectunculus lentiformis, Conrad.
Venus latilirata, Conrad.
Venus Mortoni? Conrad.
Venus staminea, Conrad.

Univalves.

Bonellia lineata, Conrad.
Cancellaria bipliciferа, Conrad.
Cancellaria engonata, Conrad.
Dentalium thalloides, Conrad.

Univalves.

Pleurotoma bellacrenata,
Scalaria pachypleura, Conrad.
Solarium trilineatum, Conrad.
Sigaretus fragilis,

Univalves.	*Univalves.*
Fissurella marylandica, Conrad.	Trochus peralveatus, Conrad.
Voluta mutabilis, Conrad.	Turritella indenta, Conrad.
Infundibulum perarmatum, Conrad.	Turritella exaltata, Conrad.
Marginella perexigua, Conrad.	Turritella perlaqueata, Conrad.
Pleurotoma marylandica,	Voluta solitaria.

Following the coast three or four miles south, we observed another vertical cliff, about thirty-five feet in elevation, near Captain Beckett's. The fossils can be traced nearly to the last mentioned locality. At base is a brown mixture of sand and clay, with the same group of shells above mentioned, which are very numerous in a bed four feet in thickness. Specimens are difficult to obtain in quantity, as they must be procured in a low cavern hollowed out by the waves. In the next three feet, the same fossils occur, less abundantly; then succeeds twenty feet of mingled sand and clay apparently destitute of fossils. Above, and resting on this, is a stratum about three feet thick, of quartzose sand, very incoherent and filled with shells, among which I recognised *Artemis acetabulum*, Orbicula lugubris, and Pecten Madisonius; but the bed being inaccessible without a ladder, the amount of species could not be ascertained.

CLIFF NEAR BECKETT'S.

Ft. in thickness.	
5	Sand, without shells.
3	Sand, with innumerable shells.
20	Mingled sand and clay, without fossils, or very rare.
3	Same as below, less numerous.
4	Sand and clay, with a group of shells like that at Hance's.

The fossilliferous cliffs of the medial tertiary period extend from here to the mouth of Patuxent river.

Through the kind attentions of Dr. James and Dr. G. Granger Tongue, we were enabled to make some interesting excursions in the lower part of Calvert county; but I regret our limited time allowed us only a rapid glance at the long line of coast, both on the Chesapeake and Patuxent, so replete with interest to the geologist, and so rich in organic remains. Commencing near the southern extremity of Calvert, we coasted the Chesapeake, in front of the usual mural escarpment which characterizes the tertiary cliffs of this region, and which continues to the vicinity of Cove Point, where the land slopes gradually to the beach. At the point where we commenced observation, vast quantities of the Turritella plebeia, the common species of St. Mary's river, appear in veins or thin beds, in clay, just above the level

of the tide. Over these is a stratum of sand ten feet thick, in which the same shell abounds. To this succeeds the group most characteristic of these tertiary deposits, imbedded in sand, the prevalent species consisting of *Artemis acetabulum*, a large Venus, *Cytherea Sayana*, C. Marylandica, Corbula idonea, C. cuneata, and Pecten Madisonius. A fine large Mactra, M. ponderosa, which abounds on St. Mary's river, occurs here, but is rare. The univalves are, Fulgur coronatus, F. fusiformis, Fusus parilis, *F. cinereus*, *Buccinum trivittatum*, and *B. lunatum*. The last three species, as well as *Artemis acetabulum*, are living on the Atlantic coast. The large Balanus proteus is abundant. Above this fossilliferous sand is a mixture of sand and clay, without organic remains. Proceeding along the shore, we soon lose sight of the Turritellæ, and Pecten Madisonius makes its appearance in great abundance. The shells here are highly ferruginous, as much so as many of the crag fossils of Great Britain, which they greatly resemble, also, in other respects. Ferruginous masses, which have fallen from the cliffs above and mingled with the wreck of pine trees, greatly impeded our progress along the shore. These indurated fragments cover the beach for some miles, and are full of fossils, among which the large Pectens are most conspicuous. From the cliff, in the vicinity of Cove Point, Mr. Markoe was fortunate enough to obtain, through the assistance of Dr. Tongue, a large skull and upper jaw of a new species of Delphinus. Dr. Wyvill, the keeper of the light-house at Cove Point, furnished us with an interesting history of Cove Point, by which it appears that the bay has made rapid inroads on the north, and extensive deposition of sand on the south. Indeed, the light-house is now in imminent danger of being undermined, and appeared to us to demand the immediate attention of the Government, to save it from being swept away.

While on the subject of the geology of Calvert, I will notice a locality on the estate of Mr. George Wilkinson, at Huntingtown, in the northern part of the county, three or four miles from the Patuxent, to whom we are indebted for every assistance, and for hospitality, for which Calvert county is proverbial. In a depression or small valley, Mr. Wilkinson has excavated a race-way through the fossilliferous "marls," which presents the following section:

2. Blue marl, with shells similar to the group at Captain Hance's.
1. Quartzose sand, with casts of Perna maxillata.

The fossils observed here are the following species: A new Balanus, B. incile.

Bivalves.—Arca dipleura, Corbula idonea, (Conrad,) Crassatella melina, (Conrad,) Ostrea percrassa, (Conrad,) Pecten Humphreysii, (Conrad,) P. Madisonius, (Say.,) Pholas ovalis, (Say.,) Perna maxillata, (Lam.,) Orbicula lugubris, (Conrad,) Pectunculus lentiformis, Venus staminea, (Conrad.)

Univalves.—Bonellia lineata, (Conrad,) Fissurella marylandica, (Conrad,) Pleurotoma ———, (new,) Trochus peralveatus, (Conrad,) Turritella indenta, (Conrad.)

Coral.—Madrepora palmata, (Goldfuss.)

Three miles from Mr. Wilkinson's, in the bottom of a ravine, great numbers of Perna maxillata and Orbicula lugubris, are imbedded in lead-colored clay. About one mile from this, I observed the following species: Crassatella marylandica, Corbula idonea, Cytherea marylandica, Astarte obruta, Ostrea percrassa.

Dr. Granger Tongue having proposed a visit to St. Leonard's creek, we coasted, in a small sloop, up the Patuxent, from near Point Patience to the mouth of the creek. This point is a remarkable spot, extending in a gradually tapering tongue

of land, considerably and regularly curved to the eastward, and becoming very narrow towards the extremity. It presents the aspect of a low sandy beach; and yet, almost immediately from its western side, the water suddenly descends to a depth of sixty feet. A few miles north of the point, a rock appears, which I shall presently describe, and which I have no doubt forms the foundation of the peninsula, as it is manifest that the sand must have some solid basis to enable it to resist the storms of centuries. This rock has originally been a stratum of coarse sand, full of fragments of Balanus proteus, mixed with many whole specimens of the same, and of Pecten Madisonius, which abound on the upper surface. Much of the sand has been washed away, and the remainder of the stratum has become cemented by carbonate of lime, and oxide of iron. It is a very porous rock, with an exceedingly craggy or irregular surface, rising to a level of about six feet above the river. Over this rock is a stratum composed of mingled sand and clay, with the same fossils, in a friable state, four feet thick; then follows a bed of gravel, with an occasional pebble, one foot in thickness; and the highest stratum consists of clay without fossils, seven feet thick.

Near the mouth of St. Leonard's creek, resting on the fragmentary rock above described, is a stratum of fine siliceous sand, cemented by carbonate of lime, in which are imbedded innumerable casts of Perna maxillata. With these the Pholas ovalis occurs abundantly, a lithodomus bivalve, always accompanying the Perna in Maryland, the thick shell of which it perforated, and where it may often be obtained. This stratum is about twelve feet thick.

On the western shore of the Patuxent, in St. Mary's county, the fossilliferous strata are visible at the mouth of Cuckold creek, just above the level of the water, and continue in a range of cliffs, northward, to within about twelve miles of Benedict. These beds, dipping to the southeast, soon give place to the upper tertiary, below the creek, whilst up the river they gradually rise to an elevation of at least fifty feet, in places, above the tide. At the landing of Dr. Gilliams, a few miles north of the last named locality, a rock first makes its appearance, nearly on a level with the river, which is very similar in aspect to that on the opposite shore; but in place of Balani, the fragments of which it is chiefly composed, are those of a large Scutella, which I have named S. Aberti. Many perfect specimens have been originally imbedded among these small fragments; but owing to their perishable nature, and the incessant action of the waves of the Patuxent upon the loosely cemented, very porous rock, few can be obtained nearly entire. The fragments of Scutella are much in the same state, and appear to have been subjected to attrition in a manner precisely similar to those of the recent shells of Anastatia Island, on the coast of Florida, which constitute a mass sufficiently coherent to be used as a building material in St. Augustine. This Scutella rock is very clearly a member of the medial tertiary formation, being identified by casts of characteristic shells, and especially by the large Pecten Madisonius, which abounds in single valves. We traced this interesting stratum a distance of six miles north of Dr. Gilliams' landing. Here it rises to a much greater elevation, and beneath it another stratum of the same formation, full of casts of Perna maxillata, extends to the level of the river. This locality is near the landing of Chapman Billingsly, Esq., who received us with cordial hospitality, and politely assisted us in exploring the vicinity. Above the Scutella rock a thin bed of *Ostrea virginiana* occurs in sand. Two or three

miles north of Major B's landing, the cliffs are very high, and the arenaceous fossilliferous stratum becomes fifteen or twenty feet in thickness, and abounds in large bivalves. The sand is quartzose and incoherent, and has evidently been the undisturbed bed of the sea; for we find the bivalves, generally, not only entire, but imbedded just in the same position they had lived in when burrowing in their native beds. The large Panopea, so abundant here, is an excellent illustration of this, always having its valves in apposition, and placed vertically, like the recent *Myæ* of the sand beach beneath. The following list comprises most of the fossils of this locality. Those species which are yet in existence, are indicated by the names being printed in *italics:*

Bivalves.

Artemis acetabulum, Conrad.
Arca idonea, Conrad.
Anomia ephippium, Lin.
Astarte undulata, Conrad.
Cytherea Sayana, Conrad.
Cytherea marylandica, Conrad.
Crassatella marylandica, Conrad.
Cardium laqueatum, Conrad.
Corbula idonea, Conrad.
Diplodonta americana, De France.

Bivalves.

Isocardia rustica, Sow.
Lucina anodonta, Say.
Mya prælonga, Conrad.
Orbicula lugubris, Conrad.
Perna maxillata, Lam.
Pholas ovalis, Say.
Pecten Madisonius, Say.
Tellina biplicata, Conrad.
Venus Mortoni? Conrad.

Univalves.

Buccinum trivittatum, Say.
Dispotæa grandis, Say.
Fulgur tuberculatus, Conrad.
Fusus rusticus, Conrad.
Fusus parilis, Conrad.

Univalves.

Fusus quadricostatus, Say.
Natica heros, Say.
Natica duplicata, Say.
Terebra simplex.
Serpula granifera, Say.

Coral—Madrepora palmata, Goldfuss.

The most interesting deposit of medial tertiary fossils, in St. Mary's county, is in the right bank of the river of that name, where the variety and perfection of the shells have long since attracted collectors and visiters to the spot. The precipitous shore extends at least two miles, interrupted by one small creek, south of which the following section is presented:

10 feet.	Mixed sand clay, without fossils.
2 feet.	Sand and clay, with the same shells as below.
5 feet.	Lead-colored clay, with— 3 group of shells, as given in the lists. 2 veins of Turritella plebeia. 1 Panopæa.

N.

St. Mary's river.

Many specimens of Arca idonea can be easily obtained here, with connected valves, in the stratum of clay; but excepting the Panopæa, the other large bivalves generally occur disunited. I have, however, occasionally found a whole Mactra ponderosa, Venus tetrica, V. alveata, Artemis acetabulum, and great abundance of the small Corbula cuneata. Fragments of shells, comminuted by attrition in the surf, occur plentifully in this deposit; which circumstance, in connection with the prevalence of single valves, shows that the deposition took place near enough to the ancient sea-beach to be influenced by the currents along the shore, or perhaps by the undercurrent of the surf, during the prevalence of violent tempests. In further confirmation of this, we observe, occasionally, a valve of an undetermined Ostrea, an estuary shell. One of the most abundant univalves is *Buccinum trivittatum*, a recent species of the eastern and middle Atlantic coast; and its usual associate in the present sea, *Buccinum lunatum*, is very common. *Natica heros*, and *N. duplicata*, (Say,) two recent univalves, with a similar geographical range, are of frequent occurrence in the clay. Some of the large univalves are most common in the arenaceous stratum, but none are limited to it. Occasionally, masses are found along the shore, which have been indurated by silex, originally in a gelatinous state, the surfaces studded by shells of various species. These siliceous beds, no doubt, are owing to the infusoria which existed in this tertiary period. North of Porto Bello, the residence of the Rev. Mr. Mitchell, the arenaceous stratum becomes of much greater thickness, and the shells are more friable; the cliff also rises to a greater elevation. Here the beautiful fossil *Artemis acetabulum*, is particularly abundant. To the south of this, near Windmill Point, Fusus quadricostatus, of Say, is more numerous and perfect than in any other known locality of the formation. The beach, for nearly a mile, is strewed with fine fossil shells of the large bivalves and univalves, in great perfection, among which the most conspicuous are, Mactra ponderosa, Venus tetrica, V. Mortoni, *Artemis acetabulum*, Fusus parilis, F. quadricostatus, and Voluta mutabilis. The east bank of the river presents a cliff of nearly the same elevation, fifteen or twenty feet. The clay rises about three feet above the level of the water, containing the same group of shells, largely mixed with fragments, which prevails on the opposite shore. The top of the arenaceous stratum is here become a hard ferruginous rock. Near the southern termination of the cliff, towards the mouth of St. Inigoe's creek, the fossils are no longer visible, except in indistinct impressions, the material of the shells having been converted, in nature's grand laboratory, into splendid masses of selenite, many of which are twelve inches in diameter, and profusely imbedded in clay near the level of the beach. Near this locality we remained several days, under the hospitable roof of our excellent friend Dr. James W. Roach.

Organic Remains found on St. Mary's River.

Univalves.	*Univalves.*
Actæon ovoides, Conrad.	*Natica heros*, Say.
Bulla acuminata, Sowerby.	*Natica duplicata*, Say.
Buccinum trivittatum, Say.	Pleurotoma bicatenaria, Conrad.
Buccinum lunatum, Say.	Pleurotoma limatula, Conrad.
Buccinum quadratum, Conrad.	Pleurotoma communis, Conrad.

Univalves.

Conus diluvianus, Green.
Cancellaria lunata, Conrad.
Cassis cœlata, Conrad.
Dentalium dentalis, Lam.
Dispotæa costata, Say.
Dispotæa grandis, Say.
Fusus tetricus, Conrad.
Fusus sulcosus, Conrad.
Fusus rusticus, Conrad.
Fusus cinereus, Say.
Fusus quadricostatus, Say.
Fusus parilis, Conrad.
Fusus strumosus, Conrad.
Fulgur coronatus, Conrad.
Fulgur fusiformis.
Fulgur canaliculatus.

Univalves.

Pleurotoma parva, Conrad.
Pleurotoma rotifera, Conrad.
Pleurotoma gracilis, Conrad.
Pleurotoma dissimilis, Conrad.
Scalaria clathrus.
Scalaria expansa, Conrad.
Terebra simplex, Conrad.
Terebra loxonema, Conrad.
Trochus humilis, Conrad.
Trochus reclusus, Conrad.
Turritella plebeia, Say.
Turritella variabilis, Conrad.
Typhis acuticosta, Conrad.
Voluta solitaria, Conrad.
Voluta mutabilis, Conrad.
Turritella laqueata, Conrad.

Bivalves.

Artemis acetabulum, Conrad.
Astarte planutata, Conrad.
Amphidesma carinata, Conrad.
Arca idonea, Conrad.
Cardium laqueatum, Conrad.
Cardita granulata, Say.
Corbula cuneata, Say.
Cytherea Sayana, Conrad.
Isocardia rustica, Sow.
Lucina cribraria, Say.
Mactra ponderosa, Conrad.

Bivalves.

Mactra subcuneata, Conrad.
Ostrea ——————?
Pecten Madisonius, Say.
Pholas arcuata, Conrad.
Pholadomya abrupta, Conrad.
Saxicava rugosa?
Solen ensis?
Venus alveata, Conrad.
Venus Mortoni, Conrad.
Venus tetrica, Conrad.

Multivalves.

Balanus proteus, Conrad.
Balanus ovularis, Lam.

From all the various localities of this formation I have obtained about two hundred and thirty-nine species of shells and corals; among these I find thirty-six species which are now existing on the coast of the United States. The number of recent, compared with extinct forms, will therefore bring this formation within the limits of the miocene period. My only doubt, heretofore, has been that it could be referred to the era of the Bordeaux deposits; but since Mr. Lyell has suggested that the latter may be an older portion of the miocene than the crag of England, which I have always regarded as identical in age with our medial tertiary, I have no longer any objection to refer the formation in question to the miocene period. I claim to have made this discovery solely by my own investigations.

POST-PLIOCENE PERIOD.

Upper Tertiary Formation.—About one mile south of Hopewell's Landing, on the

Patuxent, or the mouth of Town creek, the bank of the river presents a stratum of *Ostrea virginiana*, the shells not differing much in size and appearance from the recent oyster of the vicinity, and which might by some observers be referred to Indian agency. But this is a bed of nearly uniform thickness, traceable several miles, and frequently five or six feet beneath the surface. Some miles south of Town creek, on the farm of Dr. Neale, this bed of oyster shells lies six feet below the summit of the bank; and I noticed many shells with connected valves, among those which are disunited, probably about the same proportion which obtains among the recent species of the more exposed estuaries and lagoons. The following section will convey some idea of the bank at this place:

	6 feet.	Sand without organic remains.
	2 feet.	Mixed sand and clay with oyster shells.
	1 foot.	Large gravel and sand without shells.
	10 feet.	Dove-colored clay with ferruginous seams, and full of small crystals of selenite.
Patuxent.		N.

About five miles south of the estate of Dr. Robert Neale, at whose mansion we were most kindly received, we visited a more interesting deposit of the same age, inasmuch as the oceanic shells make their appearance in the bank of the Chesapeake, as represented in the following section:

	4 feet.	Whitish clay. No fossils.
	4 feet.	Gravel.
	3 feet.	Clay, without shells.
	4 feet.	Clay, with marine shells, very chalky, among which are *Mactra lateralis*, *Pholas costata*, *Arca transversa*. All the species here are yet in existence.
	7 feet.	Clay, similar to that last described, with an occasional oyster shell, and a few small pebbles.
Chesapeake.		N

From observations made on the shores of the Chesapeake and Potomac, it is clear that the upper tertiary borders the lower part of the peninsula, from near the mouth of Town creek on the Patuxent, to a point on the Potomac about half way between St. Mary's river and Brittain's bay. But I am disposed to extend the limits of this formation, in order to include most of those deposits of oyster shells, which are sup-

posed by many to have been distributed along shore by the Indians. These abound on the Patuxent, in St. Mary's county, as well as in many places throughout the tertiary region of Maryland and Virginia. Major Southron, who resides below Benedict, on the Patuxent, informs me that he has seen them in a bed ten feet thick; and on the Wicomico, it is said, they occur thirteen feet in thickness, covering many acres. The objections to these being deposits by Indians are at least worthy of notice, and may serve to stimulate inquiry. In the first place, the beds are of considerable extent, often at some distance from the water courses, and of no greater variation in thickness than the marine deposits of the more ancient tertiaries. Many entire shells are found among the unconnected valves. They are sometimes imbedded in sand, and others in a black mould, such as would be formed by the mud of estuaries mixed with lime, from the decomposing shells. These beds are always beneath the soil covered originally by the forest. At Easton, on the Eastern shore of Maryland, fragments of extinct species of Pecten are found among them. On the south shore of Raritan bay, the shells occur in a regular stratum, generally in single valves, mixed with an occasional specimen of *Fulgur canaliculatus*, just in proportion to the living individuals of both species in Raritan bay. On the Chesapeake, below the Patuxent, they occur at least eight feet below the surface of the country around, and were traced in a continuous deposit of nearly uniform thickness, about four miles in extent. The position and character of these deposits correspond with those of the Gnathodon on the Potomac, which might with just as much reason be referred to Indian agency, as well as the immense accumulation of the same shells for hundreds of miles along the northern shore of the Gulf of Mexico, in which it is said that Indian idols or small images have been found. Mr. Abel, who resides above Town creek, on the Patuxent river, informs me, that oyster shells, many of them with the valves in apposition, are found in his vicinity, in a bed two feet thick, ten feet beneath the surface. I shall not at present pursue this subject, intending to investigate it more leisurely at a future period, when I design to publish a more detailed history of these interesting beds. In conclusion, two important deposits of the upper tertiary will be noticed. One on the Potomac, near its junction with the Chesapeake bay, and the other on Neuse river, North-Carolina. The first of these was described by me in 1830, in the journal of the Academy of Natural Sciences, of Philadelphia, in which paper appeared the first attempt to classify and describe any of the tertiary formations of North-America.

Section near the mouth of Potomac.

Elevation fifteen feet.

		Sand and gravel.
	1 foot thick.	*Ostrea virginiana, Mytilus hamatus*, (estuary deposit,) sand.
Chesapeake.	8 feet above tide.	Clay with { *Pholas costata, Mactra lateralis, Arca transversa, Solecurtus caribaeus, &c.*, (marine deposit.)

About three miles above the low sandy point which forms the southern extremity of the Western peninsula of Maryland, the bank of the Potomac rises to an elevation of about fifteen feet at its highest point. The fossils are visible in this bank a quarter of a mile in uninterrupted extent. The inferior stratum is a lead-colored clay, containing great numbers of *Mactra lateralis*, (Say,) a common recent bivalve of the coast, which in many instances appear in nearly vertical veins, having evidently fallen into fissures in the clay. *Pholas costata* is also abundant, and each individual remains in the position in which the living shell is usually buried in the mud, that is, vertical, with the anterior or short side pointing downward. They are very fragile and can rarely be procured entire. Over the clay reposes a bed of *Ostrea virginiana* in sand, in places a foot in thickness. It is nearly horizontal, varying from a height of four, to eight or ten feet above high water mark. The fossils of this locality, with two exceptions, are common recent species of the Atlantic coast, and in some instances the original colored markings remain upon the shells. Were it not for the occurrence of *Gnathodon cuneatus*, *Mytilus hamatus*, and *Arca ponderosa*, the group would not vary from that now inhabiting the coast as far north as Massachusetts; but the presence of these three bivalves indicate that a climate equivalent to that of Florida prevailed when the shells of this locality were living in the sea. I have before alluded to the peculiar and highly important distribution of the existing *Gnathodon*, burrowing in myriads in the mud flats near Mobile, and confined to the estuaries of the Gulf of Mexico. An occasional water worn valve in the deposit on the Potomac, above described, seemed to indicate that the species lived in that river in the upper tertiary period. This conjecture was converted into certainty by an exploration of the shore farther north, which resulted in discovering a bed composed exclusively of the *Gnathodon*, on the land of Mr. Ebb, above the mouth of St. Mary's river. This bed, except that the shells are smaller, is precisely similar to those which line the bay shore near Mobile. The valves of the shells are frequently connected, and there can be no doubt that here was the spot where they lived, and were imbedded; that this was a region of sand flats bared at low tide, the water brackish, as it is now, and that the deposit near the mouth of the Potomac was of the same period, but more directly communicating with the ocean. The species found here are as follow:

Univalves.	*Univalves.*
Actæon melanoides, Conrad.	*Buccinum obsoletum*, Say.
Crepidula convexa, Say.	*Buccinum trivittatum*, Say.
Crepidula glauca, Say.	*Natica duplicata*, Say.
Fusus cinereus, Say.	*Ranella caudata*, Say.
Bivalves.	*Bivalves.*
Arca transversa, Say.	*Pandora trilineata*, Say.
Arca ponderosa, Say.	*Petricola pholadiformis*, Lam.
Corbula contracta, Say.	*Pholas castate*, Lam.
Gnathodon cuneatus, Gray.	*Sanguinolaria fusca*, Say.
Cytherea Sayana, Conrad.	*Tellina lusoria*,
Mactra lateralis, Say.	(Psammobia lusoria, Say.)
Mya arenaria.	*Solecurtus caribæus*, Lam.

Bivalves.	*Bivalves.*
Mytilus hamatus, Say.	*Solen ensis*, Lam.
Nucula limatula, Say.	*Venus mercenaria*, Lam.
Nucula acuta, Conrad.	

The entire thickness of the tertiary clays has not been determined, but it has been ascertained that they sink to a very considerable depth, enough to convey the idea of a vast period of time elapsing between their origin and final deposition. Deep harbors and bays seem to have been filled up by the very gradual accumulation of fine silt or mud; generations of shells were entombed in frequent succession, until the harbors, bays, or part of the ocean itself shrinking into shallow lagoons, no longer furnished the conditions necessary to their increase, and myriads of oysters took possession of their deserted beds. There is no pause, no interruption to this ceaseless mutability. Our harbors and our bays must, in the lapse of ages, be filled up by the unfailing influx of silt; our present beds of oysters be converted into dry banks of shells. New bays will succeed to those which we now behold; and other lagoons will encroach upon the sea. Whoever attentively examines the locality last described, on the Potomac river, will be forcibly reminded of the mutability of the present features of our earth; he can read distinctly the history of the past, and anticipate, in a measure, the annals of futurity, the new order of things, the relative condition of sea and land yet to be, long after he has passed away, and his name, his influence, his labors having left no more trace of his existence than the "baseless fabric of a vision."

In Silliman's Journal of Science and Arts, I have noticed a spot on the Neuse river, in North-Carolina, of more than ordinary interest, in consequence of the quantity of bones of land animals which are mingled with the upper tertiary shells. This place is about fifteen miles below Newbern, on the left bank of the river, and the two formations of medial and upper tertiary are in juxtaposition. The former, when I visited the spot, was concealed from observation, the excavations having been filled up, and the beds being nine feet beneath the level of the Neuse. Mr. Benners, who owned the land, informed me that all the bones were above this formation, mixed with the upper tertiary shells. These remains are nearly all water worn, black and silicified, and have evidently been transported from a distance, probably carried by ice down the ancient Neuse, and dropped among the shells of the upper tertiary period. The bank of the river is here not in any part more than twenty feet high. The surface of the fossilliferous portion is very irregular, rising in a few places to the height of ten feet above the river. Its visible part consists of a mixture of sand and clay, in which are imbedded immense numbers of *Mactra lateralis*, and abundance of *Solen ensis*, towards the top of the stratum. The shells with two exceptions, are such as now exist on the southern coast of the Atlantic, and in the Gulf of Mexico, and the evidence of a climate very similar to that of the locality last described on the Potomac, is perfectly satisfactory. The *Gnathodon* occurs here, and the whole group is very well represented in the Gulf of Mexico at the present day.

List of Fossil Shells at Benners's.

Univalves.	*Univalves.*
Buccinum trivittatum, Say.	*Fulgur canaliculatus.*

Univalves.

Crepidula fornicata, Say.
Crepidula unguiformis, Lam.
Cryptostoma perspectiva, Say.
Fulgur carica.

Univalves.

Oliva litterata, Lam.
Terebra dislocata.
Vermetus lumbricalis.

Bivalves.

Anomia ephippium, Lam.
Arca ponderosa, Say.
Arca transversa, Say.
Amphidesma æquale, Say.
Amphidesma bellastriata, Conrad.
Artemis concentrica.
Cumingia tellinoides, Conrad.
Cytherea Sayana, Conrad.
Cardium magnum, Born.
Cardium isocardia, Lam.
Gnathodon cuneatus, Gray.
Lutraria canaliculata, Say.
Mactra lateralis, Say.

Bivalves.

Nucula limatula, Say.
Nucula proxima, Say.
Nucula acuta, Conrad.
Pholas costata, Lam.
Pecten dislocatus, Say.
Solecurtus caribæus, Lam.
Solen ensis, Lam.
Tellina alternata, Say.
Tellina lintea, Conrad.
Tellina lusoria, Say.
Venus permagna, Conrad.
Venus cancellata.

I have alluded in this essay to the fact that the eocene and miocene are not connected by a single species common to both. It is equally remarkable that very few are common to the miocene and the newer deposits, and they, with one exception, are recent species. The conclusions derived from my investigations are, that the American tertiaries are of the eras of the eocene, miocene, and post-pliocene, and that the newer pliocene is either wanting, or has not yet been observed.

In concluding this brief sketch of a portion of the tertiary region, I will take occasion to remark, that it is my intention when I have fulfilled my obligations to the State of New-York, in publishing the organic remains in connection with its geological survey, to investigate the Atlantic tertiaries more thoroughly, and to submit the results of my labors to the National Institution. In the mean time, gentlemen who reside within the limits of that extensive district would contribute greatly to the advance of American geology, if they would send to the National Institution specimens, in good condition, of all the various organic remains on their plantations.

DESCRIPTIONS OF NEW TERTIARY FOSSILS.

LOWER TERTIARY OR EOCENE FOSSILS.

OSTREA.—(*Lin.*)

Ostrea scilæformis, pl. 1, fig. 1.—This singular oyster, the history of which I have briefly given, appeared so important, in a geological point of view, that I have here introduced a figure of the species, although it had been published, in 1832, in my "Fossil Shells of the Tertiary Formations," page 27, pl. 13, fig. 1, 2. The

figure now given is from a much more perfect specimen, which I found on James river, Virginia, a few miles below City Point.

SYNONYMES.

Ostrea radians, (nob.)—Fossil Shells of Tertiary Formation, pl. 13, fig. 1, (upper valve.)

Ostrea semilunata, (Lea.)—Contributions to Geology, pl. 3, fig. 69, (young.)

Ostrea divaricata, (Lea.) Do. do. fig. 70, (young lower valve.)

Having carefully studied this species in all stages of growth, in several localities, the above synonymes are undoubtedly correct.

PHOLADOMYA.

Pholadomya marylandica, pl. 1, fig. 3.—Ovate, profoundly ventricose, with coarse, irregular, concentric lines and furrows, and obsolete, rather distant, radii; summit of umbo prominent.

Locality: Piscataway, Prince George's county, Maryland.

PHOLAS.

Pholas petrosa, pl. 2, fig. 4.—Ovate-acute; anteriorly profoundly ventricose; radii sharp and numerous; dorsal margin obliquely rectilinear from the summit of the umbo; base obliquely subrectilinear; posterior side produced, cuneiform.

Locality: Occurs with the preceding species.

MEDIAL TERTIARY SPECIES.

ISOCARDIA.—(*Lam.*)

Isocardia Markoei, pl. 2, fig. 1.—Suborbicular; length and height nearly equal; inflated; umbo very prominent, and the beaks profoundly incurved; posterior margin direct, arched above, nearly straight below, and obtusely angulated at its junction with the base; base regularly, not profoundly arched; posterior slope slightly sinuous.

Locality: Captain Hance's farm, Calvert Cliffs, Maryland.

This beautiful species is easily distinguished from I. rustica, (*I. fraterna*, Say,) by the much more prominent umbo, and greater curvature of the beak, and in being proportionally much shorter. The young shells of the two species are widely unlike each other in outline, this species being round, and the *rustica* of a long, ovate figure.

Deshayes considers the *I. fraterna*, (Say,) to be identical with *I. cor.* Upon comparison, the latter was found to have a far more profound arch or rotundity to its base, as well as much greater curvature of beak; but the difference in the young shells, of either species, is so profound, that any idea of their identity would be instantly abandoned by comparison.

Mr. Markoe obtained three or four valves of this shell, and one specimen with connected valves, and I have much pleasure in dedicating the species to him, as a slight tribute of respect for his talents, zeal, and most generous devotion to science.

PECTEN.—(*Lam.*)

Pecten Humphreysii, pl. 2, fig. 2. Suborbicular, inferior valve convex; superior flat, and with about seven remote, narrow, convex ribs, and concentrically wrinkled; towards the apex is a concave depression; ears equal, sides direct and straight; inferior valve with the ribs wide, approximate, plano-convex and longitudinally striated; one of the ears emarginate at base.

Localities: Near Fairhaven, Anne Arundel county, Md. Mr. Wilkinson's farm, in Calvert county. I am indebted to Dr. Humphreys, of Annapolis, for the loan of the specimen figured, that which I found at Fairhaven being too imperfect for the purpose. I gladly attach the name of this gentleman to the species, in consideration of his love of and proficiency in scientific pursuits.

Of two specimens in the collection of the college at Annapolis, the largest measures three inches from beak to base.

DISPOTÆA.—(*Say.*)

Dispotæa constricta, pl. 1, fig. 2.—Shell irregular, elevated; laterally compressed, marked with simple lines of growth; apex prominent, with one or two minute volutions; diaphragm very profound.

Locality: Captain Hance's Landing, Calvert Cliffs, Maryland.

SCALARIA.—(*Lam.*)

Scalaria expansa, pl. 2, fig. 3.—Shell acutely ovate, moderately thick, with numerous robust recurved ribs, twelve in number, counting from the summit of the aperture to the reflected lip, inclusive; whirls profoundly ventricose at the sides, somewhat flattened above; four or five in number.

Locality: St. Mary's river, Maryland.

Two specimens of this fine Scalaria were obtained by Mr. Markoe, and none other is known to have been discovered.

BUCCINUM.—(*Lam.*)

Buccinum integrum, pl. 2, fig. 5.—Shell short, subfusiform or elliptical; smooth; destitute of ribs or striæ; spire conical, the volutions convex; aperture elliptical, about half the length of the shell; columella thick; labium reflected.

Localities: St. Mary's river and Calvert Cliffs, near the mouth of Patuxent river.

SCUTELLA.—(*Lam.*)

Scutella Aberti.—Discoidal, orbicular, very much depressed, but swelling towards the middle, and depressed at the apex; diameter five and a half inches.

Locality: Patuxent river, St. Mary's county, Maryland.

This large Scutella is very abundant; but those I have, at present, are too imperfect for minute description. A figure of it will be published when specimens in better condition shall be obtained. It is dedicated to my scientific friend Colonel J. J. Abert, of Washington, whose name it gives me great pleasure thus to connect with the tertiary rocks of Maryland.

DESCRIPTION OF A NEW EXTINCT SPECIES OF DOLPHIN; FROM MARYLAND.

By R. HARLAN, *M. D., F. L. S. Lond., Corresp. Member Nat. Institution.*

ORDER CETACEA.

GENUS DELPHINUS.

D. *Calvertensis.*

This interesting fossil consists of the skull, nearly complete, densely petrified, very weighty, tinged of a deep, black, ferruginous color; characteristic marine fossil shells adhere to its base. A portion, tested with a solution of muriatic acid, demonstrated the absence of animal matter. The external border of the superior maxillary bone is slightly broken on each side. Its discovery is due to the active researches of Mr. Francis Markoe, Jun., Corresponding Secretary of the National Institution, who obtained it from the Calvert cliffs, on the right bank of the Chesapeake bay, State of Maryland, along with other characteristic fossils. We refer, with confidence, to the preceding memoir by Mr. Conrad, for the details of this tertiary deposit. Many other osteological remains, of an interesting kind, have recently been obtained by Mr. Markoe from the same locality.

The present specimen belongs to Cuvier's first sub-genus, or "*les Dauphins à long bec.*" On comparison with the numerous species of living dolphins, it is found distinct from all of them. It approximates the Delphinapterus leucoramphus, of Peron,* but differs in its various measurements, number of teeth, and in the arrangement of the palatine bones.

It is unique hitherto in America. Indications of the existence of this genus, in a fossil state, occur occasionally in the geological reports of the State of Maryland.†

Four species of fossil Delphinus have been described by Cuvier, (*ut supra.*)

The first consists of a nearly complete skeleton, discovered by M. Cortesi, on the Appenine hills, south of *Fiorenzuola.*

The second species consists of portions of the upper and lower jaws of a Delphinus, disinterred from a falunière, (marine debris,) in the department of Landes, noticed by Cuvier under the name of "*Dauphin à longue symphyse de la mâchoire inférieure;*" *ut supra, page* 312.

Third species, also from the same locality, with marine shells, consisting of a portion of the lower jaw. It is closely allied to the common dolphin, or *D. delphis.*

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* Vide Cuvier. Ossemens Fossiles, vol. 5, part 1, page 289, plate 21, figures 5 and 6; edition 1823.

† "In an essay, *On the Physical Geography of Maryland*, which I furnished in 1837, to the Transactions of the Maryland Academy, (says Dr. Ducatel, Geologist of the State of Maryland,) I took occasion to say, in referring to the fossilliferous deposits of the tertiary formations of the State, that 'the most constant attendants upon these marine shells are the ribsand vertebræ of a species of *Delphinus*, the palatal bones of some fish, and a great number of shark's teeth of all sizes.' In the same essay, alluding to the living genera of marine animals that are found in the Chesapeake bay, I say, 'The largest aquatic residents of the Chesapeake bay, at least in the portion of it within the limits of Maryland, are the porpoise, (*Delphinus phocæna,*) and the sturgeon, (*Acipanser bavirostrum,*) although occasionally some of the smaller cetacea venture nearly all the way up in pursuit of their prey, during the spawning season of the herring and shad; several individuals of the beluga whale, (*Delphinus, leucas,*) having been caught in the spring of the last year,' &c. The skeleton of the last mentioned is now in the Baltimore Museum."

A fourth species, consisting of a portion of the superior jaw, has been found in the calcaire grossier, in the department of Orne.

M. Cuvier has been able to satisfy himself that all these species are distinct from each other, as well as from the living species.

The specimen before us bears the nearest comparison with the first of the above named species, but is sufficiently distinguished by the larger size, relative proportions, and number of teeth of the Appenine species.

Description of D. Calvertensis.—In general outline, resembling other skulls of this genus. The head is proportionably narrower, and snout more elongated, than the Italian specimen with which I have compared it. The occipital and temporal ridges are strongly developed, indicating muscular strength, especially of the jaws. We find similar indications in the remains of the teeth, which have been large and robust. There are ten sockets remaining on the right side, with the teeth broken off at the rim. These organs approximate each other. The ten sockets include a line four and a half inches long. There has been about one and a half inches of the end of the snout broken off, which would afford room for two or three more teeth—making twelve or thirteen, in all, on each side. The pyramidal eminence, anterior to the posterior nares, on the palatine surface, is strongly pronounced. It terminates opposite the last tooth. The excavations or longitudinal grooves, on each side of the upper portion of this eminence, are unusually deep. The palatine surface is slightly convex transversely. Above, the head is narrower across the occipital ridges than other allied species, and narrower than the transverse diameter of the base of the skull. The ossa nasi are longer than broad, and convex. The atlas vertebra adheres to the occiput, above the condyles. It measures, across the transverse processes, five inches; transverse diameter, three inches; and the ring is about one inch thick.

In the following admeasurements, one and a half inches must be considered as the length of the last portion of the extremity of the snout.

Dimensions.—Total length of head, from the temporal crest to the presumed extremity of the jaw, - - - - - - - - - - 17 inches.

From the anterior borders of the spiracles to the presumed extremity of snout, - - - - - - - - - - - 11.5 inches.

Breadth of skull above, across the occipital crests, - - - 5 inches.

Breadth at base, between the temporal bones, - - - - 6.5 inches.

Longest diameter of largest tooth at the socket, - - - 3½ tenths.

The head of the Appenine species is one foot, ten inches, nine lines long, French measure. The spiracles are one foot nine inches, from the extremity of the snout.

The accurate figures which accompany this description, will render further details unnecessary.

Geological Series: Middle tertiary of Maryland.

Description of the Plates.

Figure 1.—Basal view of the skull.

Figure 2.—Superior view of the skull.

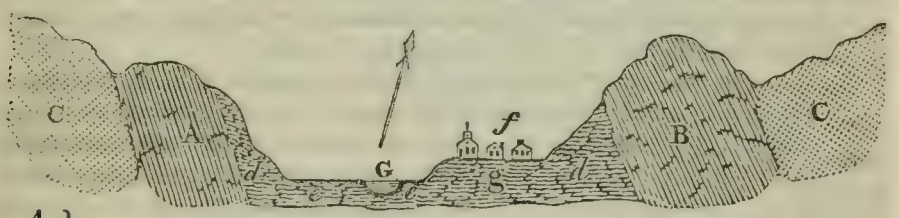
Figure 3—Lateral view of the skull.

Figure 4.—Occipital view of the skull.

COMMUNICATED BY S. WEBBER, M. D.

Sketch of the great Geological Features of the Valley of Connecticut River, at Charlestown, New-Hampshire, and Remarks on some Crystals found in the Slate-rock scattered in that region; with specimens.

The valley of the Connecticut river, in its widest extent, may be said to be included between the summits of the Green Mountains of Vermont on the west, and those of the granite ridge, forming the height of land between it and the valley of the Merrimac, on the east. From the edges of the proper valley in which its waters flow, there is a continual though broken rise to these great boundaries, from whose sides flow the tributary streams of the river. The immediate valley is bounded by a steep ridge of hills on either side, between the feet of which and the river spreads an extent of fertile meadow; the deposit of the river, through which it winds its way, alternately approaching to and receding from these ranges of hills. The nucleus and substance of these hills in Charlestown, consists of strata of argillaceous slate, upturned nearly perpendicularly, the direction of the strata being nearly north and south, and the dip a little to the south of east. On the east side, passing over the summit of this first ridge, there is a slight valley, beyond which rises a ridge of granitic structure, seeming as if forced up through the chasm made by the depression of the eastern edge of the slate strata forming the first ridge, and holding them in place by its pressure on the inverted edge and sloping surface. Somewhat the same arrangement is to be found on the western side. The following is a sketch:



A. } Strata of slate.
B. }

C C. Granite ridges.

d d. Earth and coarse gravel forming the outer surface of the hills, in many places stratified, and resembling the deposits in the bed of a river.

e e. Meadows or interval land, consisting of fine silt.

G. River.

g. Plain of fine yellow sand, with a slight covering of vegetable mould, upon which stands

f. The village of Charlestown.

The arrangement is not, however, altogether so simple as is represented in this sketch. The granite is often intermixed with beds of gneiss, many of them upturned like the strata of slate, and running parallel to them. These, as well as the slate, are seamed with veins of quartz, and sometimes of calcareous spar; and there are all gradations of slaty structure, from gneiss to argillaceous slate. In some places the slate is wanting, and the granite approaches close to the river, and even extends into it. On the Vermont side, beds of limestone occur occasionally between the slate and the granitic rocks.

The soil of the hills, in the eastern part of Charlestown, abounds in fragments of slate, of a coarse texture, with numerous specks of black mica, and sometimes with small garnets, seemingly one of the varieties between argillaceous and mica slate. These fragments are of all sizes—from a mere pebble to the weight of many tons; some much worn, and others rough and angular, and with considerable difference in fineness of texture. They are all characterized, however, by the presence of numerous crystals, of a curious character, which form the more immediate objects of this paper, and of which I have the pleasure to send the National Institution a number of specimens; an end of each of which I have cut and slightly polished, for the purpose of showing more readily the structure.

These crystals have been variously denominated by different persons who have seen them, though no one appears to have given any careful description of them. One of the first persons who mentioned them to me, when I came into this part of the country to live, spoke of them as being crystals of staurotide; another afterwards called them macle, (and they are so termed in Cleveland's Mineralogy,) while Dr. Jackson, in the last report of his geological survey of New-Hampshire, speaks of them as macle, or (apparently as synonymous) hemitropic andalusite. They are certainly of considerable variety of structure, under a general similarity of configuration; and, while agreeing exactly with none of the minerals described under the foregoing names, have yet points of resemblance with each.

Staurotide, or granatite, as called by some, belongs to the garnet family, and macle and andalusite are of the feld-spar family, if macle be, as I presume, the same as chiastolite, according to the nomenclature of Jameson. His description of the mineral, to which he gives this name, is, as far as my recollection serves, almost precisely the same as that which Cleveland gives of macle.

The staurotide consists of two six-sided prisms, intersecting each other either at right angles or obliquely. The crystals in question are sometimes found in this form; and two of the specimens I send herewith, afford instances of it—one being an intersection nearly at right angles, and the other an oblique intersection, at about forty-five degrees. The generality of the crystals are, however, single, consisting of four-sided prisms, the bases of which are either rhomboids or rhombs. In the most perfect crystals, the latter shape is the prevalent one, and the figure is often very exact, the angles being extremely well defined. They have also a natural cleavage through the shorter diagonal of the rhomb, by which they are divided into two triangular prisms. Now Haüy shows that the primitive form of granatite is a quadrangular prism, the bases of which are rhombs, with a similar cleavage through the shorter diagonal of the bases. The angles of the rhombs he makes to be about 130° and 50°, which agrees with the measurement of some of the most perfect of these crystals.

Some of them also agree with staurotide in other external characters, as the dark, reddish, brown color, the internal glimmering lustre between vitreous and resinous, in the general character of the fracture, in opacity, with occasional translucency, in hardness, brittleness, and infusibility. Yet still the specimens, in which these last characters are best marked, are precisely those which I have always found single, with rhombic or rhomboidal bases, and not intersecting each other. Those so intersecting have a different set of characters, apparently belonging more to the description of macle or chiastolite, yet not precisely agreeing with that.

Macle or chiastolite is described as being always crystallized in nearly rectangular four-sided prisms. When, however, the end of the prism is carefully examined, there will be perceived in it a blackish prism enclosed in the larger one, which is of a greyish, yellowish, or reddish white color. From each angle of the central prism a blackish line passes to the corresponding angle of the outer prism; and in each of these external angles there is commonly a small prismatic space, filled with the same black matter as that of which the central prism is composed, which is a dark clay slate, the same as the rock in which the crystal is imbedded.

As was before observed, Cleveland's description agrees with this, though, in conjunction with a figure corresponding to this description, he gives, as another variety, I think, a figure of a crystal with a rhombic base, the marking of which agrees very well with some of my specimens. I have never found any of these crystals rectangular, and but few approaching to that shape.

In the most perfect specimens, the whole rhomboidal crystal seems to be enveloped in a uniform coat of black, slaty matter, of a very fine grain, and easily admitting of considerable polish. When a cross section is made, (and it usually breaks in these specimens pretty smoothly,) and the surface ground down and polished, it will be seen that this thin black casing encloses a substance of a reddish yellow color, of glistening and somewhat foliaceous or sparry appearance, sometimes opaque, sometimes slightly translucent. This yellowish substance encloses a smaller hollow prism, of the same blackish matter, marked merely by a thin black line, and within it is contained the same reddish yellow matter, as filled the space between it and the outer coating; giving, in fact, the appearance of a small prismatic crystal, of yellowish matter, with a blackish coat inserted in the centre of a larger crystal, of the same color, while small black lines pass from the angles of the inner case of black matter, to the corresponding angles of the outer. These black lines are very feint and delicate in the transverse diagonal of the crystal; thicker and more strongly marked in the longitudinal diameter; spreading a little as they approach the outer casing, so as to give the idea of being formed by a duplicature of that investment. In one or two crystals, indeed, this formation is distinctly marked.

In other crystals, less perfect, the bases are more generally rhomboids than rhombs. The outer black case is thicker, the yellowish contained matter less regular in its figure, (the angles being rounded off,) and, instead of an inner crystal resembling the outer, it is divided, by transverse diagonals of the black matter, into four portions. In some specimens these are very small, appearing on the section merely like dots, while the bulk of the crystal is composed of the blackish coat, which in these is rather grey than black. In other instances there is no regular figure to the contained matter, but it is dispersed through a black crystal, in irregular patches, giving to the section a mottled appearance.

Although the disposition of the separate parts differs from the description, I have looked upon these two varieties as macle, but of a different variety from that commonly described. Yet it is among the second variety that I have found very good specimens of the intersection of crystals forming a cross.

In a third variety, there is no yellowish contained matter to be distinguished. The crystals consist wholly of blackish or grayish matter, sometimes with and

sometimes without a central spot corresponding with the shape of the crystal, of a different tint or texture from the rest. One or two of these that I send, have a reddish tinge in the gray, and I have conjectured that some more strongly tinged varieties of this kind may have induced Dr. Jackson to speak of them as andalusite; to which, otherwise, I have seen no resemblance in any crystals I have examined. Andalusite is usually hard enough to make a slight scratch upon quartz; while these grayish crystals may be cut or scraped with the point of a knife. This variety also affords instances of intersection.

As a fourth variety, I have ranked those described as resembling granatite in external characters, other than the hexagonal shape and crossing. In some of these, while the texture of the crystal seems the same, the insertion of the internal crystal, and the connecting lines of the angles, are distinctly marked by a light furrowed line, as of a joining. Some variety of this kind may be that of which Dr. Jackson speaks. He obtained his specimens from a locality several miles distant from me, and which I have never examined.

SPECIMENS.

In Package No. 1.—These are specimens of the most perfect form, having the inner crystal distinctly marked, with the diagonal joinings, and the appearance of duplicature of the outer investment to form the longitudinal diagonal. One of the specimens is triangular, being half of a crystal divided in its natural cleavage through the transverse diameter. Another is divided obliquely lengthwise, and two black lines may be observed traversing the crystal diagonally lengthwise.

Package No. 2.—This contains specimens of those described as the second variety, from the perfect form of those in No. 1, to a more central spot of the yellowish matter, and two handsome specimens of the mottled kind. One of these specimens, with a central dot, is an imperfect six-sided prism, and is half of one of the crystals of a stauroidean formation. The remainder of the cross accompanies this package.

Package No. 3.—Specimens of the gray and blackish variety, without any enclosed yellowish matter, but one or two of them with a darker nucleus, similar in shape to the external crystal. One of the gray crystals is an instance of an oblique intersection. This specimen is split longitudinally, and shows one crystal passing through the other.

Package No. 4.—Specimens of the dark reddish, brown variety, very hard, brittle, and difficult to be detached from the matrix. One of them has a perfect formation; in the others it is not to be discovered.

Quere.—Are not these last crystals radically distinct from the others, and even from the perfectly shaped one with them?

All of the crystals that I have seen, have been found in the detached masses spoken of. I have never met with them in any ledge, though others have told me that they have found them so. I have fancied, from my own observation, that they mistook the projection of some huge half-buried fragment for the outcropping of strata, as they were persons of little experience in such researches.

FROM RICHARD RUSH: ON THE SMITHSON BEQUEST.

SYDENHAM, NEAR PHILADELPHIA, *March* 4, 1842.

FRANCIS MARKOE, ESQ.,

Corresponding Secretary, National Institution.

DEAR SIR: I have to thank you for the "Bulletin of the Proceedings of the National Institution for the Promotion of Science," that you were so good as to send me; and although I am late in doing so, my thanks are not the less sincere. I have read it with great interest, and think that no one could read it without perceiving the advantages of such an institution. During the short period that it has been in operation, the indications are ample, both in the diversified objects which it proposes to itself, and in the communications addressed to it, that it will be likely to prove metropolitan in character and usefulness, as it is in situation.

But what impels me, on this occasion, to something beyond a mere formal though thankful acknowledgment for the Bulletin, is the desire to notice a passage in two communications it contains—one from Mr. Duponceau, of Philadelphia, and the other from Mr. Maxcy, our Chargé d'Affaires at Brussels, relative to the Smithsonian legacy.

Both these correspondents of the Institution, the former long and favorably known to philosophy and science, the latter an enlightened and patriotic American, looking at his country from abroad, have, without concert, united in the opinion that it was such an institution as yours that Mr. Smithson must have meant in making the munificent provision in his will for establishing one at Washington, and in the wish that Congress might take it as a basis in fulfilment of his intention.

I cannot restrain the impulse that would add my humble though not less earnest opinion and wish to theirs.

If it be scarcely a dispute that individual zeal and exertion can do more towards striking out useful projects for mankind than Governments, it would not be easy to imagine a case in which this truth could be more applicable than to the Smithson trust.

This great and beneficent trust remains wholly unexecuted by the hands of Government, though to those hands solemnly confided, and as solemnly accepted.

Would this have been the case had it been confided to individual hands? A negative reply may be safely given.

A native of France, long a citizen of the United States, dies in the midst of us. He leaves two millions of dollars to found a college for the education of orphans, in a city of one of our States, confiding the management of his bounty to legislative and municipal authority. Already ten years have elapsed, and the philanthropic intentions of the munificent donor remain a dead letter. I allude to the Girard trust.

A generous and enlightened Briton dies abroad. He leaves a hundred thousand pounds sterling to the United States, to found, at Washington, an Institution "FOR THE INCREASE AND DIFFUSION OF KNOWLEDGE AMONG MEN."

What a beautiful simplicity in his words! How comprehensive they are! How boundless in their intended benefits! Yet we are now approaching the fourth summer since the money was delivered to the United States, as the high trustee of this great duty, and the intentions of this donor, too, are still a dead letter.

Thus, whether upon the scale of the nation or a State, we seem alike inert under these dearest of human obligations.

It is neither my province nor desire to impute blame any where; but I state facts that all may be allowed to lament, and that all must desire should cease.

Active in all ways as a people, even to the charge of overdoing things, shall we become sluggards over what is incomparably the most important of all? Shall MIND be alone neglected? Shall we continue indifferent to benefits in this great field, as if our Governments desired to keep knowledge out of sight, whilst our people, as individuals, are seen to thirst for it?

Let Congress hasten to wipe off the suspicion of this reproach. Let it, in the words of the venerable Duponceau, speaking from his retirement, and in the fullness of experience and years, "*lay hold of your Institution and make it its own.*"

Your machinery, put together by individuals, has been tried, and works well. It wants but little legislation to raise it up to the level of the Smithsonian will.

A law that would adopt it under the name stipulated, with the requisite provisions for the application of the annual interest of the fund, and the due retention of a visitatorial power by the United States, seem the principal enactments that would be called for.

No expensive corps of officers, no costly salaries, need start into being; the experience of your Institution showing that there are men among us who love science for its own sake, and who are willing to devote portions of their time to its advancement; and that their exertions can be centralized at Washington, and made to extend over all parts of our country and the world, through aids that the Government can give.

For the buildings, for the botanic garden, for the chemical laboratory, for the philosophical and astronomical apparatus, for the museums of natural history and receptacles for agricultural and mechanical specimens, for the library and lectureships; for all, in a word, that relates to science, literature, and the arts, the plan of "The Royal Dublin Society," as seen in Mr. Weld's description, published in your Bulletin, might perhaps be usefully consulted; though the Garden of Plants at Paris is, indeed, as your public-spirited and distinguished associate, Mr. Poinsett, thought, a model not easily to be surpassed in all that relates to scientific usefulness, arrangement, and grandeur.

The fact stated by Mr. Weld, that "The Royal Dublin Society" receives a grant of £5,600 sterling a year from the British Parliament, so far deserves notice as that it is about the amount of the annual interest of the Smithsonian fund.

Let, then, this precious fund no longer be idle. Let it be made to yield, without more delay, those moral blessings for which it was sent to this hemisphere. Let Congress take your Institution as a foundation. In the contrariety of opinion as to any other plan, the much longer postponement, if not entire frustration of the benign intentions of the donor, is too much to be feared.

Being yourselves but trustees for diffusing knowledge among your fellow-men, and seeking nothing selfish, there could be no objection to your asking Congress to invest you, under its own guards and sanctions, with the fund. By my estimate of duty, you owe it to science and your country to take that step, on the broadest grounds of utility to both. In your administration, with the aid of so rich an invest-

ment, to the mental wants of the community, much might be hoped from salutary influences in calming the too intense and exclusive excitements at Washington, where only a slender population is concentrated. By bringing to that seat of official power other excitements in diversified objects of intellectual curiosity and attention, a change might be witnessed that would act usefully upon the spirit of legislation itself, producing good effects to the whole Union. These are not irrational hopes. Knowledge is strengthened by its alliance with power. Power is raised and purified in its aims, and chastened in its exercise, by the influence of knowledge. Every day's delay in improving the Smithsonian fund to its intended and stipulated uses, is an injury to the present and future race of men. It is a wrong, silent in its operation, but not the less a wrong. Let me even say that one of the incidental uses of the fund, when in activity at the seat of Government, will be to shed a benign aid towards the permanency of the Union itself, by that community of mind and feeling which science and literature, well endowed and cultivated at the metropolis, will in time help to engender and diffuse.

Are not these high inducements to your application to Congress; and ought they not to create a reasonable confidence that the application would be favorably listened to? Else, why stand upon the merits of our political forms over old and hereditary institutions? Why think that ours rest upon right reason, the fruit of knowledge, and theirs only upon show? Why boast that ours appeal to the understanding, which knowledge forms, and theirs to the senses?

Honored by having been chosen a corresponding member of your Institution, my only fear is lest this letter should be deemed presumptuous. But I take shelter under the consciousness of a good motive. Perhaps, also, I may be at fault in information touching what may already have been done in regard to the suggestions I venture to offer. In any event, I will fain hope for their indulgent reception. One apology for the letter lies in the fact, that it was my lot to have been the instrument, in the hands of the Government, of obtaining the Smithsonian fund for the United States. This has naturally turned my thoughts to it anxiously, however inadequately. It was a spectacle as full of interest as it was novel, to see a great nation a suitor before the tribunal of another great nation, where the issue joined had exclusive relation to the interests of MIND; and it engaged, proportionably, the thoughts and conversation of those who knew how to appreciate interests so transcendant.

My next apology thence is, in the belief I entertain—with all deference to those who think otherwise—a belief derived from intercourse at the Royal Society and elsewhere, while in London on that errand, with those who were the friends and associates of Mr. Smithson in his lifetime, (and among them I name the estimable and enlightened Mr. Guillemard, once known as a commissioner in our country, under the British treaty,)—that an institution like yours, in its main features, would be the kind of one he would himself have designated. Chemistry, of all the sciences, was his favorite pursuit, as the archives of the Royal Society would attest; but the words of his will, catholic in their spirit and boundless in their scope, include every thing. That the Court of Chancery in England would have affirmed that will in behalf of a foreign nation, unless in full faith that its sole and grand condition should be executed with reasonable diligence, is not to be supposed; a consideration to redouble all other motives that should now operate upon us, to

incur no further arrears in meeting a palpable and high national duty. In conclusion, I may be pardoned for adding that, in obedience to a call from the Government, I offered a plan, in fulfilment of his will, immediately after returning from England with the fund. In some respects it was like yours, though not so good, because not so simple; besides that yours has now the advantage of actual and successful organization.

With ardent wishes for its further and full success, whether adopted by Congress or not, but with wishes as ardent that that high body may not suffer this great trust fund to remain any longer as a talent buried in the earth, I am, dear sir, with great respect and regard, your faithful and obedient servant,

RICHARD RUSH.

FROM PETER S. DU PONCEAU: ON THE SMITHSON BEQUEST.

PHILADELPHIA, *April*, 1842.

FRANCIS MARKOE, jr., Esq.,
Cor. Secretary of the National Institution for the Promotion of Science.

MY DEAR SIR: I have received your several letters, with the documents, respecting the Smithsonian legacy, which you have had the goodness to transmit to me at my request. I have studied them with great attention, and, I shall add, with pleasure; as you well know that the subject is very near my heart, you will judge of the satisfaction that I have had in their perusal, and in reflecting upon their contents.

When the subject of this legacy was brought, for the first time, before Congress, by a message from the President, I find, from the report of the select committee to whom it was referred, (at the head of which was the illustrious John Quincy Adams,) that numerous plans and schemes were presented to that committee for the application of that fund. No one of them, says the report, appeared to that committee adapted to accomplish the purpose of the testator. "They generally contemplated the establishment of a school, college, or university. They proposed expenditures absorbing, in the erection of buildings, the capital of the fund itself, or a very large portion of it, leaving little or nothing to be invested as a perpetual annuity for future and continual appropriations, contributing to the improvement of future ages, as well as of the present generation; and in most of the projects there might be perceived purposes of personal accommodation and emolument to the projector, more adapted to the promotion of his own interest than to the increase and diffusion of knowledge among men."

I have used the words of the committee, without adding any thing of my own. It appears to have been the opinion of that respectable body, that neither the establishment of a school, college, or university, was adapted to the accomplishment of the purpose of the testator. It appears, also, that the great expense which the plans proposed would occasion, and which will absorb not only the interest but the principal of that legacy, was a strong objection in the minds of the committee. Therefore, two things resulted from this opinion; the first, that something more was con-

templated by the testator than an establishment intended for the education of youth; and the second, that the legacy itself, though liberal, was not adequate to the establishment of an institution that would require large buildings and other expenditures that usually attend establishments based upon a large foundation. As Congress did not act upon that report, we may well presume that its opinion coincided with that of the committee.

As things stood at that time, it was very difficult to come to a conclusion upon this very important subject. Mr. Adams, no doubt considering the inadequacy of the fund to an establishment that would embrace all the sciences, proposed that its application should be confined to the promotion of the most important of all sciences, astronomy, and that it should be employed in the erection and maintenance of an observatory, and generally for astronomical purposes. This was, as far as I can judge, the best plan that could be proposed under the then existing circumstances; nevertheless, it was not thought to answer the views of the testator, and therefore it was not carried into execution.

When we consider, attentively, the words by which Mr. Smithson has expressed the object of his legacy, we cannot but be convinced that his views were more extensive than the foundation of an establishment for the promotion of particular objects of science, and that he contemplated an institution that would embrace the whole circle of human knowledge. His object is stated by himself to be "the increase and *diffusion* of knowledge *among men*." It is knowledge in general that he contemplates, and its diffusion amongst all mankind. This idea was thrown out by a few individuals at home and abroad, but does not appear to have attracted much attention.

While, in consequence of the variety of opinions which existed upon this subject, no measure was taken to carry the testator's will into execution, there arose, at the city of Washington, by the combined efforts of the Government and of public-spirited individuals, an institution truly national, having for its object the promotion of science. When that institution was first established, I addressed to you a letter in November, 1840, which the institution has done me the honor to insert in its first bulletin, in which I suggested the idea of applying the Smithsonian fund to that institution. I find, from Mr. Rush's letter, which you have communicated to me, that I was not the only one to whom that suggestion occurred. Since that time, it appears to have struck the mind of many of the most respectable friends of science, and it appears to have agreed with the opinion expressed by your distinguished President, Mr. Poinsett, in his inaugural address. I see, with pleasure, that Mr. Rush entertains the same opinion. No one has had a better opportunity to know the real intentions of the testator; and his opinion, on that and many other accounts, is entitled to the greatest respect.

Indeed I do not see how two institutions, having a similar object in view, can exist, at present at least, both with limited means, at the city of Washington, at the same time; and if it could be, the similarity of their pursuits might create jealousy, which would be productive of very disagreeable consequences. The National Institution, founded in a manner and patronized by the Government, would with justice claim the superiority over a rival establishment, which had no such grounds to support it. The national honor would suffer by such a contact, and in the capital of a great nation it could not be tolerated that the foundation of an indivi-

dual, a foreigner too, and bearing his name, should stand in opposition to a noble establishment, bearing the name and supported by the patronage of the Government of a great nation; so much the more as the funds of the former are limited, and comparatively small in respect to what a national institution may expect to possess in the course of half a century, from the liberality of our citizens, the patronage of the Government, and other sources. Even at present, the value of the objects confided by our Government to its custody, the fruits of our scientific expeditions, are thought by many to equal if not to exceed that of the Smithsonian legacy. It is essential, therefore, that the National Institution should preserve its honorable standing, situated as it is in the capital of the United States, and promising to be a lasting monument of our scientific and literary glory.

Without meaning in the least to detract from the merit of the liberal and benevolent testator, who I think is justly entitled to our liveliest gratitude for his munificent legacy, I cannot help regretting that he made it a condition of his gift, that the institution which he contemplated should bear his name, considering the extent of its objects, and its location in our capital city. I do not know, at least I cannot remember to have read or heard of any similar instance. No such condition was made by the venerable John Harvard, when he bequeathed half his fortune to the then infant college, now University of Cambridge, in Massachusetts. The gratitude of the country effected that which the testator neither required nor even expected. That seminary of learning is now justly called Harvard University; and had Mr. Smithson contemplated such an institution, his name would undoubtedly have been given to it without his requiring it. When Sir Hans Sloane made his munificent bequest to the Government of his country, he did not require that the British Museum, of which it was the foundation, should be called by his name. It received another denomination, but while it exists, memory shall never cease to connect with it the name of its benevolent founder. But the Museum, being a national institution, could not properly have received any other than a national denomination. When the late Stephen Girard bequeathed millions to the city of Philadelphia for the erection of a college, he made no condition like that indispensably required by Mr. Smithson. The college, however, bears his name, which gratitude has bestowed upon it. I might cite many other instances of gratitude perpetuating the name of a benefactor, without its being made by him an express condition of his gift.

It would be unjust, however, to blame Mr. Smithson for having inserted this condition in his liberal bequest—it is a natural feeling to wish to perpetuate one's name. But if Mr. Smithson had sufficiently reflected upon it, he might have effected it, like Sir Hans Sloane, in a manner equally honorable, and the name of Smithson would have shone forever in the list of its principal founders.

But it is useless to reason upon what might have been done; the legacy has been accepted with its condition annexed to it, and therefore the establishment to be founded by Congress, in consequence of this bequest, must bear the name of the Smithsonian Institution. No change or alteration can be made in it—the will of the testator must be literally obeyed.

But it does not follow from any of the expressions in that instrument, that the Smithsonian Institution must be separate and independent, and that it cannot be connected with, and made a branch of a national establishment, as is the case with

the different colleges in the universities of Europe. I therefore would recommend, that the Smithsonian Institution should be annexed to, and made a part of the national establishment; dependent on, and subordinate to it, preserving to the national body its superiority and supremacy over all its dependencies, and the Smithsonian among others. By this arrangement, the object of the testator will be fully accomplished. His will requires only an institution for the "increase and diffusion of knowledge among men," and that it should bear his name. By the plan which I take the liberty to suggest, the terms of the legacy will be fully complied with.

I have seen with great pleasure the bill brought into the Senate by the Hon. Mr. Preston. It fully coincides with the views that I have expressed. It may perhaps receive some modifications in the details, but, keeping the main design in view, they can easily suggest themselves. The object, in my opinion, is, to preserve the superiority of the National Institution over the Smithsonian, and that of the Government over both. Mr. Preston's plan appears to me well calculated to accomplish these purposes.

I would beg leave to suggest, whether it would not be advisable to make some small alteration in the name of the National Institution, so that it should not bear exactly the same name with the Smithsonian, but one expressive of some degree of superiority. I would recommend, for instance, that of Institute, which appears to me more dignified than that of Institution, which is equally applicable to a school or college as to a great national establishment for the promotion of science. If any other, or a better name can be suggested, it will answer the same purpose. My idea would be to call the national establishment the "National Institute for the Promotion of Science," and the subordinate one the "Smithsonian Institution," without more. But this is, after all, but matters of secondary consideration.

The more I consider Mr. Preston's bill, the more I find it difficult to amend it. Therefore I shall not undertake it. If the passage of that bill can be obtained, the cause of science shall have gained an immense advantage, and due honor shall have been paid to the memory of the benevolent testator.

I have already observed, that the Smithsonian fund—half a million of dollars—was inadequate to the objects contemplated by either of the two institutions that I propose to be joined. When I consider that two millions of dollars were bequeathed by Mr. Girard to the city of Philadelphia, with a larger fund to be recurred to in case of need, merely for the erection and endowment of a college, and that this immense legacy has produced nothing in the course of ten years but the bare walls of an unfinished *palace*, I must acknowledge that I tremble at the possible consequences of the go-ahead system, which, notwithstanding the severe lessons that we have received, still prevails too much among us. Rome, as the proverb says, was not built in a day. We have centuries before us, and the present generation must not expect to enjoy all what is promised to the country by the foundation of the National Institution, with the addition of the Smithsonian legacy. We must work for posterity. I rejoice that the stocks in which the capital of that legacy has been invested by Congress, are not susceptible of a ready sale. I hope that for a long time, the interest alone, and if possible only a part of it, will be employed for scientific purposes; that in the erection of buildings, the embellishment of the city will not be attended to, but their usefulness alone contemplated; and that the strictest economy will prevail in the application of the means. De-

pend upon it, that if time is suffered to exercise its never-failing influence on our noble Institution, it will rise, in perhaps less than half a century, to an equality with the most admired institutions of the same kind in Europe; but if economy is lost sight of, it will experience the fate of other great undertakings which have failed from want of a due regard to this principle. I hope I shall be pardoned this involuntary effusion, for which I am well convinced, nothing but the perhaps excessive zeal which I feel for the permanency of our great Institution can afford an excuse. Old age, perhaps, may also afford an apology.

I am, respectfully, dear sir, your most obedient humble servant,

PETER S. DU PONCEAU.

CIRCULAR.

The Department of American History and Antiquities of the National Institution for the Promotion of Science, established at the seat of the General Government, respectfully invites public attention to its objects. These are "to discover, procure, and preserve, whatever may relate to the Civil, Literary, and Ecclesiastical History of America in general, and of the United States in particular." In conceiving and attempting to execute so comprehensive a plan, the Institution anticipates the approval of the friends of literature and science, and the coöperation of all who feel particular interest in subjects connected with American History. The topics embraced by the plan are so various, that almost every individual of liberal studies is competent to promote, in some manner or degree, its successful operation.

A full enumeration of the topics, in relation to which contributions are desired, would lead to details of inconvenient length, and is made unnecessary by the extensive range of the general plan. The most important may be included under the following heads:

1. Facts relating to the discovery and settlement of America, to the Colonial and Revolutionary history of the North American Colonies, and Biographical notices of persons connected with such discovery, settlement, or history.

2. Biographical notices of persons distinguished in the Aboriginal history of America, or distinguished in the history of the United States, as Ministers of the Gospel, Politicians, Lawyers, Physicians, Mechanics, &c.

3. Facts illustrating the History, Manners, Customs, Language, and Traditions of the Indian tribes, and manners of the early Settlers.

4. Indian names of Towns, Villages, Rivers, Islands, Bays, and other remarkable places and objects.

5. Statistics of Agriculture, Commerce, Manufactures, and Population.

6. Topographical sketches of Cities, Towns, Villages, and their vicinities, with Statistical details concerning them.

7. Roads, Canals, Bridges, &c.

8. Religious, Benevolent, Scientific, and Literary Institutions and Associations.

9. Colleges, Schools, and all Institutions for promoting Education.

10. Laws, Journals, copies of Records, Treaties, Documents, and other Papers relating to the several States of the Union, and to the Territories.

11. Proceedings of Political and Ecclesiastical Assemblies.

Original communications on any of the foregoing subjects, or on other subjects coming within the plan of the DEPARTMENT, are solicited.

Donations of Manuscripts, Books, Pamphlets, Almanacs, Newspapers, Maps, Charts, Paintings, Engravings, &c., &c., illustrative of American History and Antiquities, will be thankfully received, and deposited, with the name of the donor, in the Library of the National Institution.

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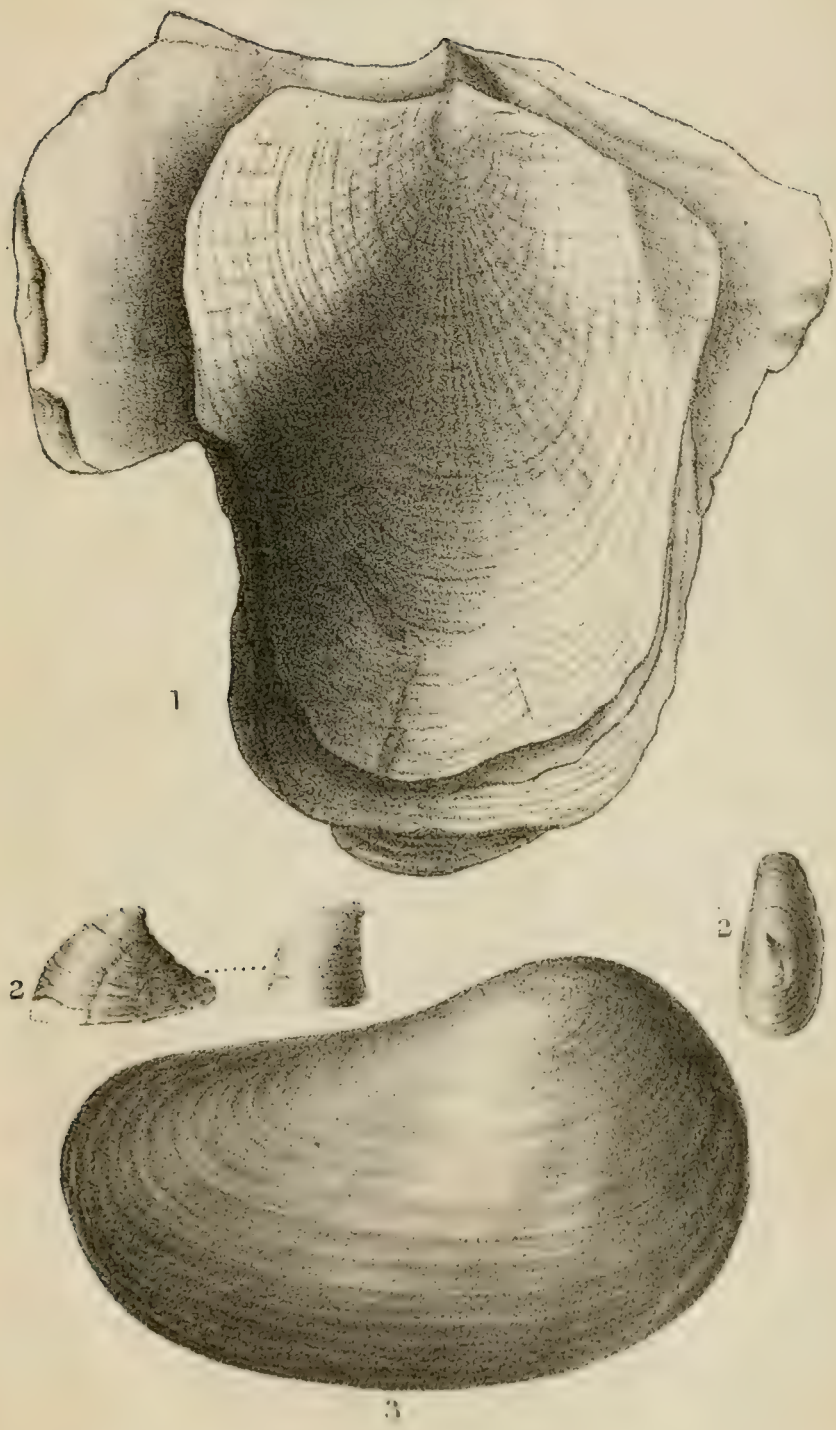
ERRATA.

Page 86, tenth line from the bottom of the page, read, "from George Read, U. S. Consul at Malaga."
Page 166, line 4, for "Schoedlen" read Schoedler.
Page 166, line 13, for "hygrometin" read hygrometric.
Page 168, line 13, for "Pigfe" read Fyfe.
Page 168, line 16, for "Schaufbautl's" read Schaufhautl's.
Page 168, line 17, for "Mauley's" read Manby's.

10 AUG 1987

BRITISH MUSEUM
NATURAL HISTORY



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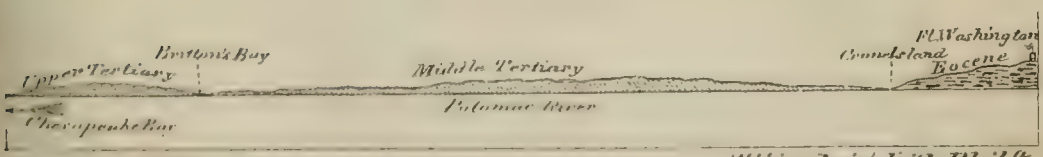

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ith Phil.a

Fig. 1.

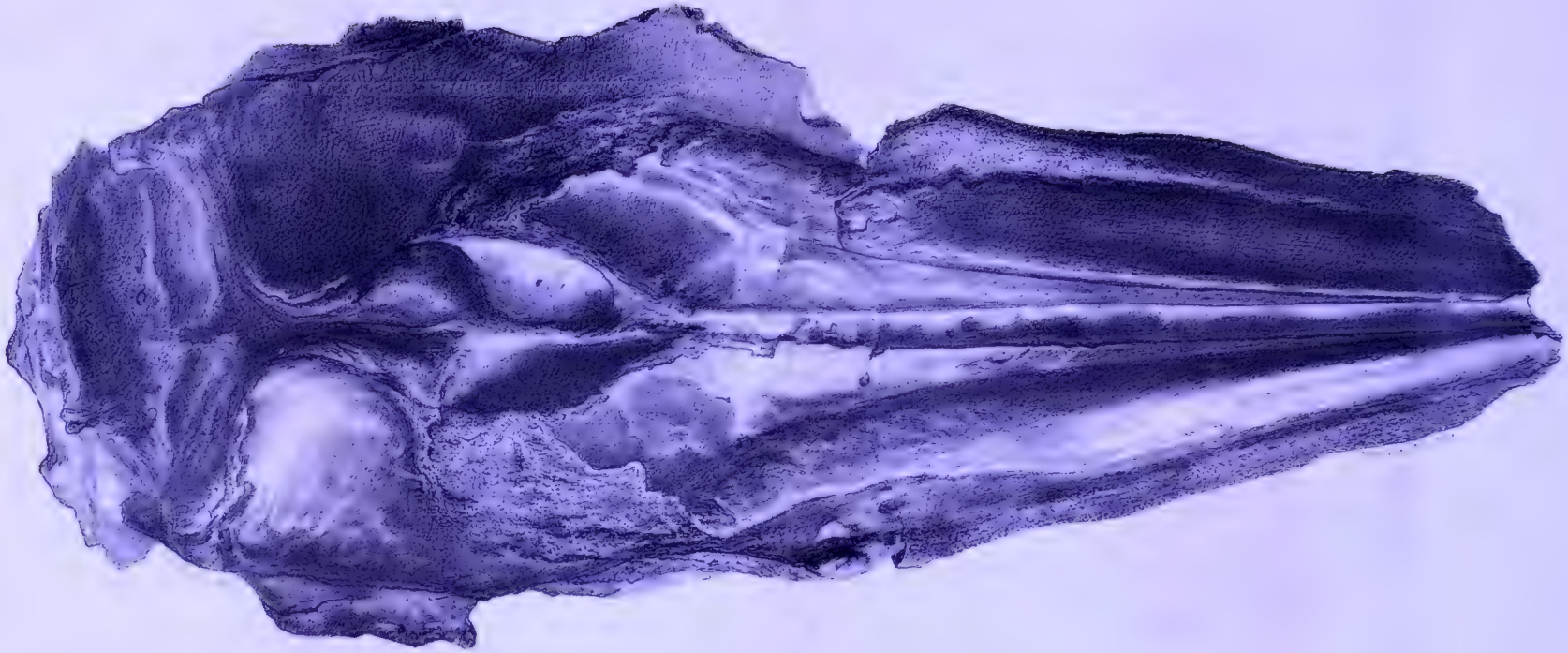
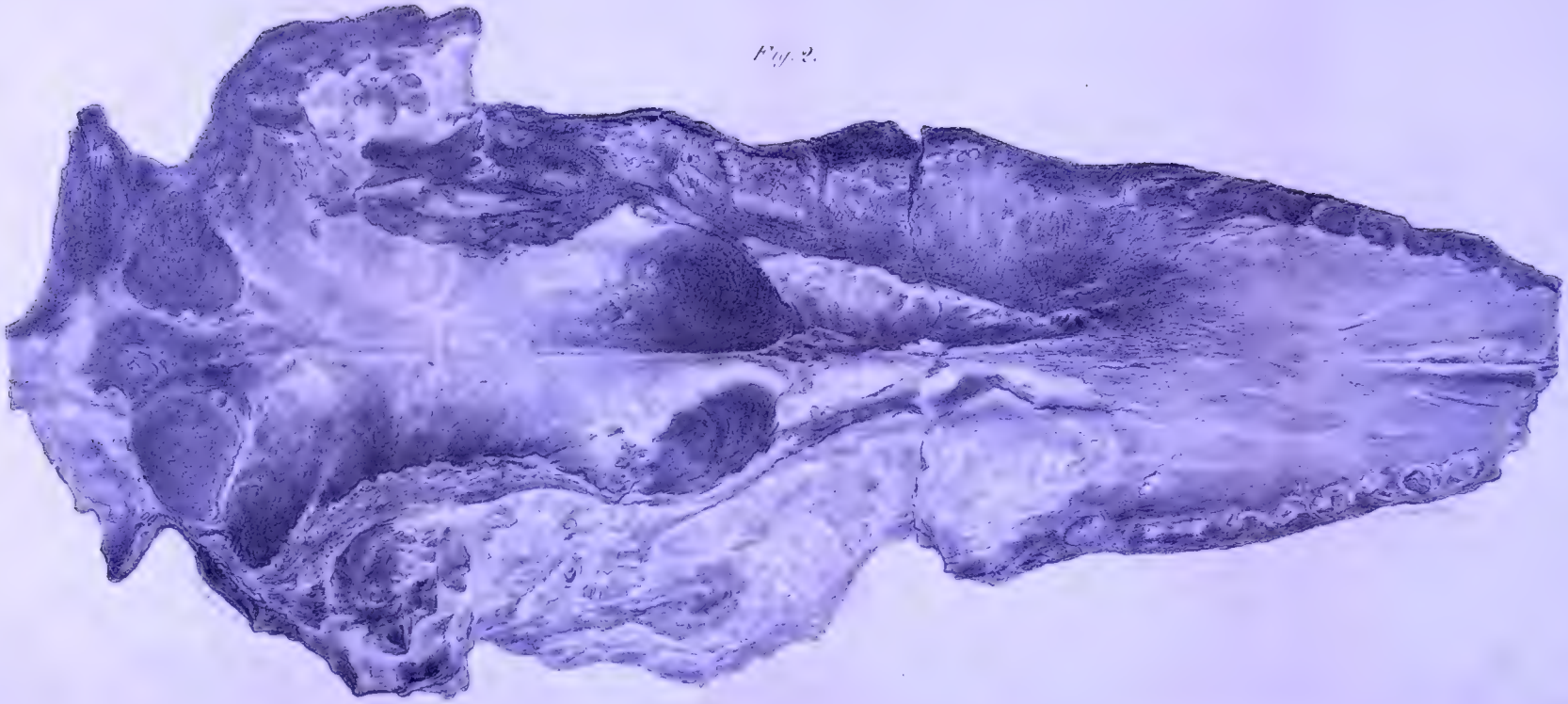


Fig. 2.



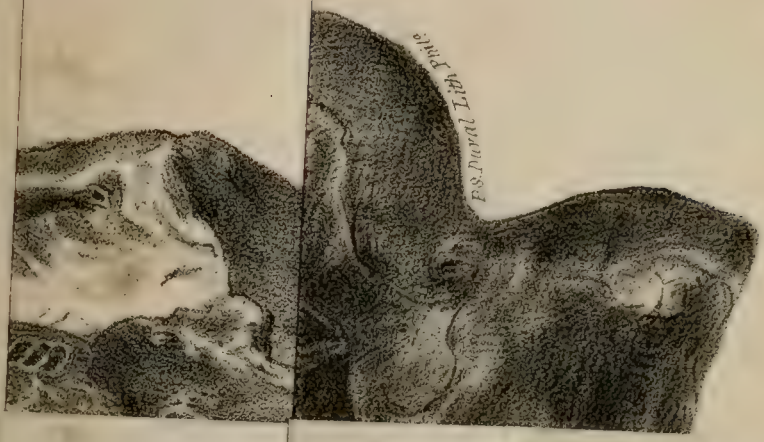

F.S. Duval Lith Phil.

Fig. 2
Fig. 1

BY-LAWS.

ARTICLE I.

Sec. 1. The Recording Secretary shall give at least two weeks notice, in two or more of the newspapers published in the City of Washington, of every annual meeting.

Sec. 2. Stated and special meetings shall be called by or through the Recording Secretary.

Sec. 3. A quorum to do business shall consist of at least ten resident members entitled to vote.

Sec. 4. A member introducing a stranger shall hand his name and place of residence, in writing, to the presiding officer.

Sec. 5. The order of business at stated meetings shall be as follows, viz:

1. Reading the minutes.
2. Nomination of candidates for membership.
3. Election of candidates.
4. Notice of contributions and deposites.
5. Reading reports and communications—
   I. From officers of the Board of Management.
   II. From Departments.
   III. From Committees.
   IV. From individual members.
      (*a.*) Honorary.
      (*b.*) Corresponding.
      (*c.*) Resident.
6. Extraordinary business.

Sec. 6. At the annual meeting, the election of officers shall succeed to the reading of reports.

Sec. 7. At special meetings, the object for which the meeting was called shall have precedence of all other matters, after the reading of the minutes.

Sec. 8. A suspension of the regular order of business for a specific purpose may, at any time, be had, two-thirds of the resident members present, who are entitled to a vote, concurring therein.

ARTICLE II.—*Of Officers.*

Sec. 1. Before entering on his duties, the Treasurer shall give bond to the Trustees in such sum, and with such security, as the Board of Management may deem appropriate for the security of the funds of the Institution and the faithful discharge of his duties.

Sec. 2. The Treasurer shall keep an account of the receipts and disbursements made by him, and make a report thereof to the Board of Management, at the stated meeting in December annually. His books and papers shall be always open to the inspection (at his office) of the said board, or any committee that may be appointed by the Institution.

Sec. 3. The Treasurer shall receive all dues, being authorized, hereby, to employ a collector thereof, and shall pay out the money of the Institution upon accounts passed at stated meetings, and not otherwise.

Sec. 4. All money, books, papers, &c., appertaining to the office of the Treasurer, shall be transferred to his successor.

Sec. 5. The Corresponding Secretary shall conduct the correspondence, under the direction of the Institution. All papers, letters, &c., appertaining to his duties shall be subject to the disposal of the Institution; and what may remain in his hands at the end of his term shall be transferred to his successor.

Sec. 6. The Recording Secretary shall keep a journal of the proceedings of the Institution, and also of the Board of Management; shall sign all orders made by either, in attestation of their correctness; call meetings, and, generally, perform such duties as attach to his office; and, at the end of his term, transfer all books, papers, &c., in his possession, belonging to the Institution, to his successor.

Sec. 7. A report shall be made by the Board of Management to the annual meetings, of the general as well as fiscal concerns of the Institution.

ARTICLE III.—*Of Expenditures.*

Sec. 1. No expenditure shall be made for, or in the name of the Institution, without its direction.

ARTICLE IV.

Sec. 1. All elections shall be made by ballot, and a majority of all the members present entitled to vote shall be necessary for the election of officers.

Sec. 2. Vacancies shall be filled by the Institution at the next meeting after their occurrence.

ARTICLE V.—*Of the Departments.*

Sec. 1. The departments of the Institution shall consist, for the present, of—

1. Chemistry.
2. Geology and Mineralogy.
3. Geography, Astronomy, and Nat. Philosophy.
4. Natural History.
5. The application of Science to the Useful Arts.
6. American History and Antiquities.
7. Agriculture.
8. Literature and the Fine Arts.

Sec. 2. The Institution, at any stated meeting, may add and organize any other department that its wants or condition may justify.

Sec. 3. Every resident member shall join one or more of the departments.

Sec. 4. Each department shall have power to organize and subdivide itself into sections, and make such regulations as may be necessary for its government, provided they do not conflict with the Constitution or laws of the Institution.

Sec. 5. Each department shall keep, or cause to be kept, full minutes of its proceedings, and submit the same, or such portion thereof as may promote the cause of Science, to the Institution, as often as it may deem proper, or as called on to that effect.

Sec. 6. Each department shall have the direction of the arrangement of that portion of the Cabinet, and the instruments appertaining to it, as relates to the branch of Science under the care of such department, subject to the supervision of the United States' Curators.

Sec. 7. Each department shall make an annual report to the Board of Management at the stated meeting in December, embracing its condition, progress, and operations during the year, together with suggestions for improving its usefulness for the ensuing year.

ARTICLE VI.—*Of the Cabinet.*

Sec. 1. Donations made to the Cabinet shall be marked with the name of the donor.

Sec. 2. Specimens may be placed in the Cabinet on special deposite, subject to removal by giving the Institution previous notice at some stated meeting.

ARTICLE VII.

Sec. 1. The *Annual* and *Stated Meetings* shall be held at such places as shall be determined upon by the Institution.

Sec. 2. The place of holding a *Special Meeting* shall be designated by those by whom the said meeting shall be ordered.

THIRD BULLETIN

OF THE

PROCEEDINGS

OF THE

NATIONAL INSTITUTE

FOR THE

PROMOTION OF SCIENCE,

WASHINGTON, D. C.,

February, 1842, to February, 1845;

ALSO,

PROCEEDINGS

OF

THE MEETING OF APRIL, 1844.

WASHINGTON:
PRINTED BY WILLIAM Q. FORCE,
PENN. AVENUE, CORNER 10TH STREET.
1845.

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Corner Penn. av. and 10th street, Washington.

PROCEEDINGS

OF THE

NATIONAL INSTITUTE

FOR THE

PROMOTION OF SCIENCE.

Stated Meeting, March 14, 1842.

The Corresponding Secretary announced the following contributions and deposites:

For the Cabinet.

Columba passerina, (*Florida.*)—*From Dr. A. McWilliams.*
Skull of Canis cinereo-argentatus, (*Georgetown.*)—*From*
Mus musculus, (common Mouse.)—*From T. Campbell.*
Specimens of Birds, &c.—*From Dr. George C. Leib, Philadelphia.*

List of specimens presented by Dr. Leib:

Strix nyctea, *Michigan.*	Hirundo bicolor, *Michigan.*
Ardea exilis, *Michigan.*	Ortyx, *Java.*
Fringilla grammaca, *Michigan.*	Glaucopus, *Java.*
Lobipes hyperboreus, *Michigan.*	Lanius, *Java, India.*
Anas discors, *Michigan.*	Bucco, *Java, India.*
Gallinula galeata, *Michigan.*	Vireo, *Java, India.*
Charadrius virginiacus, *Michigan.*	Motacilla, *Java, India.*

BIRDS' EGGS.—*Michigan.*

Gallinula galeata,	Fringilla pusilla,
Ardea exilis,	Fringilla socialis,
Turdus felivox,	Icterus phœniceus,
Tyrannus intrepidus,	Fulica americana.

SHELLS.

9 specimens Unio, *Michigan.*	6 specimens Anadonta, *Michigan.*

Sitta carolinensis, Fringilla iliaca, Fringilla canadensis, Fringilla tristis.—*From John Tenley, Washington.*
Cervus dama, ? (European Fallow Deer.*)—*From Dr. Carr.*
Fringilla cærulea, Bombycilla carolinensis.—*From George Fuller, Washington.*
Mustela vison, (Mink.)—*From Martin Johnson, Washington.*

* This animal (a buck, with the summit of the horns palmated) was shot in Maryland by a hunter. It had probably escaped from the park of a gentleman in the vicinity, who is known to have the European fallow deer domesticated.

Bombycilla carolinensis, Sialia Wilsonii, (*from Washington.*)—*From Thomas Tonge.*

Fringilla hyemalis, Fringilla melodia, (*from Washington.*)—*From Augustus Brown.*

Bombycilla carolinensis, Agelaius phœniceus, (*from Washington.*)—*From R. J. Pollard.*

Ulula nebulosa, Fringilla iliaca, Fringilla nivalis, (*from Washington.*)—*From E. W. Hansell.*

Pelecanus onocrotalus, Diomedea.—*From Dr. L. Feuchtwanger, New York.*

Lt. James M. Gilliss, United States Navy, communicated his meteorological journal, kept at the Observatory, Washington City, for January and February, 1842; and curves of magnetic declination, observed at Washington City, Philadelphia, and Cambridge, Massachusetts, for one hour each day, from the 20th to the 25th of October, 1841, both days inclusive; which were referred to the Department of Astronomy.

Mr. Polk read and submitted a paper on insects found in the snow; which was referred to the Department of Natural History.

Dr. H. King read and submitted a paper on the subject of donations, deposites, and exchanges; which was referred to the Committee on Exchanges.

Professor Espy addressed the meeting, and illustrated his remedy for smoking chimneys, by experiments with a caminator.

Stated Meeting, April 11, 1842.

The Corresponding Secretary announced the following contributions and deposites:

For the Cabinet.

Lithographic Portrait of Col. P. P. Pytchlynn, Choctaw delegation.—*From Charles Fenderich.*

One Cent, coin of 1783; one Cent, coin of 1787.—*From William Blanchard.*

Bottle with Oysters attached.—*From John F. Webb.*

Specimen of Wood from the deep cut of the canal, Washington City; Fork found at old Fort Cumberland.—*From William G. Cranch.*

Half Dollar, emission of 1792.—*From George M. Davis.*

Specimen of Type used by Republicans in New Jersey.—*From Martin Johnson.*

Skin of Deer, party-colored, (*Cervus virginianus.*)—*From Lewis Rufner, Kanahwa County, Virginia.*

Pelican, (*Pelecanus onocrotalus:*) Albatross, (*Diomedea exulans.*)—*From L. Feuchtwanger, New York*

Two Salamanders, (*Salmandria salmonia.*)—*From*
Stone Axe, and two curiously wrought Stones.—*From Thomas Tanner, Washington.*
Skeleton of a Gazelle.—*From J. J. Drake, New York.*
Curiously wrought Wreath of Wood.—*From Joseph Weber.*
Twelve fossil Shells—six Ostrea, six Turritella; fragment of fossil Wood.—*From Henry Byrne.*
Collection of recent Shells from the Potomac.—*From Col. P. Force.*
Collection of recent Shells from the Potomac.—*From J. P. Couthouy and H. King, M. D.*
Two Eggs of the Bemen Goose.—*From M. C. Jones, St. Mary's County, Maryland.*
Shells and Minerals, from Illinois.—*From D. A. Bulkeley, Jacksonville, Illinois.*
Several specimens of the Anadonta of the Potomac.—*From a Negro.*
Box of Shells.—*From S. Taylor, Wisconsin Territory.*
Marble, from Rutland, Vermont; Marble, from Middlebury, Vermont.—*From M. Smith, Rutland, Vermont.*
Fossil Wood and Sulphuret of Iron, from deep cut of Baltimore and Ohio Railroad.—*From Joseph Willet.*
Astacus Bartonii, Coluber septemvitatus, Coluber sipedon.—*From William Belt.*
Colaptes auratus, (Flicker.)—*From J. H. Fowler.*
Turdus rufus, (brown Thrush.)—*From S. B. Sherwood.*
Picus pubescens, (downy Woodpecker.)—*From T. Tonge.*
Numenius longirostris, Rallus virgnianus.—*From W. Walker.*
Podiceps carolinensis.—*From L. Hayes.*
Four specimens Fungia, Tahiti; four specimens Achatina perdix, Cape Palmas.—*From J. P. Couthouy.*

For the Library.

The Atmospheric Railway. A letter to the Hon. the Earl of Ripon, President of the Board of Trade, &c., by James Pim, M. R. I. A., &c., (with plates;) London, 1841.—*From Charles Vignolles, Civil Engineer, &c., &c.*
Directions for Collecting and Preserving Objects of Natural History, issued by the Maryland Academy of Science and Literature; by Wm. Edward Coale, M. D., J. H. Quimby, and Henry K. Hazlehurst.—*From W. E. Coale, M. D.*
Sixth Annual Report of the Geological Survey of Pennsylvania, by H. D. Rogers, 1842.—*From Townsend Ward.*
The Silk Culturist's Manual, &c., by John d'Homerque; Philadelphia, 1839; 12mo.—*From P. S. Duponceau.*
The Propulsion of Vessels of War, and those for Ocean, Lake, and Canal Navigation, by Steam or any other appropriate moving power, by E. F. Aldrich, New York.—*From the Author and Inventor.*

Nautical Observations on the Port and Maritime Vicinity of Cardiff, with Occasional Strictures on the 9th Report of the Taffvale Railway Directors, and some general remarks on the Commerce of Glamorganshire, by Capt. W. H. Smyth, R. N., K. S. F., &c., &c.; Cardiff, Wales, 1840.—*From the Author.*

The New Planetarium, for accurately finding the True and Apparent Places of the Planets on any Day during the Present Century, by J. G. Brent, Bristol.—*From the same.*

Supplement to the Antiquitates Americanæ, edited under the auspices of the Royal Society of Northern Antiquaries, by Charles Christian Rafn; Copenhagen, 1841.—*From John Cuthbert, U. S. Consul, Hamburg.*

The 21st Annual Report of the Board of Directors of the Mercantile Library Association; New York, 1842.—*From Charles Baldwin.*

An Address on the Remedies for certain Defects in American Education, by Hon. Levi Woodbury; Washington, 1842.—*From the Author.*

Report on the Organization of a High School for Girls, and Seminary for Female Teachers; Philadelphia, 1840.—*From A. D. Bache, President of Girard College.*

Report of the Principal of the Central High School, Philadelphia, July, 1841, by A. D. Bache.—*From the Author.*

Niagara Falls, their Physical Changes, and the Geology and Topography of the Surrounding Country, by James Hall, Geologist of the State of New York.—*From the Author.*

Proceedings of the Academy of Natural Sciences, Philadelphia, vol. 1, No. 10; January, 1842.—*From the Academy.*

Revista de España y del Estrangero, Director y Redactor Principal D. Fermia Gonzalo Moron, Tom. 1; Madrid, 1842.—*From A. Vail, Chargé d'Affaires, U. S., Madrid.*

Historical Review of the Rise, Progress, Present State, and Prospects of the Silk Culture, Manufacture, and Trade in Europe and America, by P. S. Duponceau; Philadelphia, 1831.—History of the Silk Bill, by the same; Philadelphia, 1827.—Historical Discourse before the Society for the Commemoration of the Landing of Wm. Penn, October 24, 1832, the 150th anniversary of that event; by the same; Philadelphia, 1832.—*From the Author.*

American Bacillaria, part second; Naviculacea; by J. W. Baily, Professor of Chemistry, United States Military Academy.—*From the Author.*

Physiology for Schools, by Reynell Coates, M. D.; Philadelphia, 1842.—*From the Author.*

Catalogue of the Columbian College of the District of Columbia, Washington, 1839.—*From W. Q. Force.*

Meteorological Observations made at the Observatory of Harvard College, Cambridge, Massachusetts, for September, October, and

November, 1841, by W. Cranch Bond, Astronomical Observer to the College.—*From the Author.*

Meteorological Observations made by B. B. Brown, St. Louis, for January and February, 1842.—*From the Author.*

Memoria de la Junta Delegado del Liceo Artistico y Literario de Madrid, 1841.—*From the Liceo.*

Constitution of the Young Men's Missionary Society at Bethlehem; Philadelphia, 1842.—*From Maurice C. Jones.*

Annales de l'Institut d'Afrique, November and December, 1841, and January, 1842.—*From Henry Wheaton.*

Whirlwind Storms, with a Reply to the Objections and Strictures of Dr. Hare, by W. C. Redfield, January 15, 1841.—*From the Author.*

A Brief Preliminary Account of the Hessian Fly and its Parasites, by Edward C. Herrick, Yale College, April 28, 1842.—*From the Author.*

Transactions of the American Philosophical Society; Philadelphia, vol. 8, part 1.—*From the Society.*

Memoirs of the War of the Southern Department of the United States, by Henry Lee, Lieut. Col. Commandant of the Partisan Legion, during the American War; Washington, 1827, 8vo.—*From Francis Markoe, Jr.*

Boston Journal of Natural History, part 1, Nos. 1, 2, 3, 4; vol. 2, Nos. 1, 2, 3, 4; vol. 3, Nos. 1, 2, 3, 4; vol. 4, No. 1.—*From*

Journal kept by an Officer.—*From Giles F. Yates, Schenectady.*

An Introduction to Universal Language, and Metaphysical Illustrations of Progenitive Names, designating the Natural Specific Operative Energies, Powers, Capacities, and Attributical Virtues of the Soul, in which are explained the Family Names of each Member of the Senate and House of Representatives of the United States; also, the Elemental Constituent Rudiments for the Foundation of an Attributical and Universal Definite Language, by J. C. David; Washington, 1838, 12mo.—*From the Author.*

Torpedo War and Submarine Explosions, by Fulton.—*From Wm. Shoemaker.*

Census of the United States for 1840.—*From Martin Johnson.*

Thornton's British Flora, 2 vols.—*Deposited by Wm. G. Cranch.*

The Topaz, newspaper, containing notice of the National Institute, No. 1, vol 1; Middlebury, Vermont.—*From J. Battel, Editor.*

Meteorological Tables, kept at St. Louis, Mo., (in Western Atlas of March 9, 1842.)—*From Dr. B. B. Brown, St. Louis, Mo.*

Abstract of Correspondence.

Letters—

To J. H. B. Latrobe, Baltimore, February 10, 1842.

To the same, February 18, 1842.

To William Swaim, M. D., Philadelphia, February 19, 1842.

To Joseph Delafield, New York, February 19, 1842: Respecting Count Castelnau, &c., &c.

To Robert Walsh, Paris, February 23, 1842: Directing him, by permission of Secretary of State, to forward books, &c., for the Institution to Department of State—Guizot's picture, &c., &c.

To H. J. Rogers, Baltimore, February 25, 1842: Informing him of the disposition made of his letter and telegraph.

Letters and Communications.

From Marquis de Gerando, Paris, November 1, 1841.

From Robert Walsh, Paris, December 14, 1841: Enclosing a note from Baron Dupin, respecting his election as corresponding member, and asking how he is to forward books, &c., given him for the Institute.—M. Guizot's picture.

From H. H. Sylvester, Washington, February 17, 1842.

From Charles Vignolles, Professor Civil Engineering, University College, London, January 6, 1842: Acknowledging membership, and presenting a pamphlet on the means of obtaining locomotion on railways by atmospheric pressure. Is preparing several railway surveys on this principle, which he will communicate to the National Institute.

From Capt. Wm. Denison, Royal Engineers, Woolwich, January 20, 1842.

From William Sidney Green, M. D., Salem and Memphis, Tennessee, February 2, 1842: Communicating a manuscript essay on meteorology, and a pamphlet containing an essay on the sense of hearing, embracing a new theory of the production of sound. Will collect and send specimens of natural history to the Institute.

From Wm. Edward Coale, U. S. Navy, Boston, February 8, 1842: Offering suggestions as to the best modes of collecting and exchanging specimens, and a pamphlet on the subject, prepared by himself and others, for the Maryland Academy of Sciences, &c.

From Asa Christie and J. J. Beardslee, (to Col. Abert,) Manheim, Herkimer County, New York, February 16, 1842: Offering their services to collect moose, and other zoological specimens for the Institute, if sufficient inducement be held out to them.

From Capt. F. Buchanan, U. S. Navy, Annapolis, February 18, 1842.

From Capt. R. C. Buchanan, U. S. Army, Florida, February 20, 1842.

From Henry J. Rogers, Baltimore, February 21, 1842.

From J. H. B. Latrobe, Baltimore, February 25, 1842: Offering explanation of his remarks respecting the dome of the capitol, &c.

From Rev. C. B. Hadduck, Dartmouth College, New Hampshire, February 29, 1842: On the importance of cultivating Christian literature.

From John Pierce, Brookline, Massachusetts, March 2, 1842.

From Hon. Richard Rush, Philadelphia, March 4, 1842: Observations on the Smithsonian and National Institutions, &c.

From Charles Burroughs, Portsmouth, N. H., March 5, 1842.

From W. Cooke & Son, Baltimore, March 5, 1842: Forwarding two boxes minerals.

From T. F. Drayton, Hilton Head Island, S. C., March 7, 1842.

From Rev. S. G. Bulfinch, Washington, March 14, 1842: On the subject of the dome of the Capitol.

From James M. Allen, Civil Engineer, Auburn, New York, March 16, 1842.

From Townsend Ward, Philadelphia, March 18, 1842.

From P. S. Duponceau, Philadelphia, March 18, 1842.

From Noah Webster, New Haven, March 21, 1842.

From Edward H. Courtenay, New York, March 21, 1842.

From Dr. J. R. Coxe, Philadelphia, March 22, 1842: Acknowledging membership, and referring to a memoir on the new Academy of Bologne for useful hints on the subject of a proper building and arrangements for the National Institution.

From A. H. Palmer, New York, March 23, 1842.

From J. H. Belcher, Philadelphia, March 26, 1842.

From D'A. A. French, Washington, March 28, 1842: Asking for the report of the Institution on his paper on the English verb, and his Grammar.

From the same, March 29, 1842.

From A. B. Quimby, Washington, March 28, 1842.

From E. F. Aldrick, New York, March 30, 1842: Communicating a pamphlet describing a new mode of propelling steamers, invented by himself, which he wishes the Institute to examine and report upon.

From R. M. S. Jackson, Philadelphia, March 31, 1842.

From Hon. C. M. Huntington, Washington, April 8, 1842: Acknowledging membership, and enclosing five dollars subscription.

From N. P. Colomer, Secretary Liceo Artistico y Literario de Madrid, January 15, 1842.

From A. H. Palmer, American and Foreign Agency, New York, April 8, 1842.

Dr. King presented a letter received by him from T. L. McKenney, in behalf of the United Brethren of Bethlehem, Pennsylvania, soliciting donations to their Museum; which was read and referred to the Committee of Exchanges.

Lieut. Gilliss presented Meteorological Journal kept at the Observatory, Capitol Hill, for March, 1842.

On motion, it was *Resolved*, That the subject of Mr. Aldrick's communication be referred to the Department of the Application of Science to the Useful Arts, with instructions to report upon it at the next stated meeting.

Stated Meeting, May 9, 1842.

The Corresponding Secretary announced the following contributions and deposites:

For the Cabinet.

Uniones, 60 varieties; Anadons, 1 variety, Wisconsin river.—*From Stephen Taylor, Muscoday.*

An old Knife, formerly belonging to Daniel Boone, of which some account is given in a letter from Capt. Boone, U. S. Dragoons, his son, to W. L. Wharton, Surgeon U. S. Army.—*From W. L. Wharton, Surgeon U. S. Army.*

Egyptian curiosities, &c.—*From George R. Gliddon, Corresponding Member, late U. S. Consul for Cairo, Egypt.*

The following is a descriptive list of the articles presented by Mr. Gliddon:

No. 1.—Fragment Limestone. This is a piece of the *lining* of the tomb of the High Priest, "Petamonophth," at the "Apapeef," Thebes. The tomb being of the time of Psameticus second, the hieroglyphics on it were cut before the year 588, B. C.

No. 2.—One piece Porphyry (?) picked up by me one day at Heliopolis, "On" of the Bible. The hieroglyphics on it are* * * * * * with the value of which I am unacquainted, unless it be a homophone of , which means God. Supposing, however, this to be the signification of the first letter or symbol, the inscription might read thus: "God (?) Rha in the country (or city) (?) of Rha," which would be the "City of the Sun," *Heliopolis.* The signs are an abbreviation of l'habitation de Phrè, or Rha, *Heliopolis.*—Champollion Gram. chap. 5, page 157. I mention this because it would be a curious coincidence to find on a little fragment picked up by chance on the mounds of Heliopolis, (now marked solely by the solitary Obelisk of Osertasm first, and the portions of the name of Ramases third Sesostris on a shattered monolith,) the very name of the ancient city amidst the ruins of which the stone was found.

No. 3.—A piece of marble from the ruins of Dendera, Tentyris.

No. 4.—A piece of marble from a shattered Monolith, on the Iland of Sehayl, first cataract, Nubia.

No. 5.—A piece of the gigantic statue of Ramases third Sesostris at the "Ramsessium," Thebes, erroneously called the "Memnonium." This statue when perfect weighed about 900 tons in *one* block of granite, until overthrown by the Persians and shattered. It had been cut and finished at the syenite quarries at Aswan, first cataract, and transported from its bed, (which is *still* visible at the quarries,) one hundred and fifty miles to its present position prior to B. C. 1499. The granite is a fair specimen of Egyptian monumental *syenite.*

No. 6.—A piece of the alabaster sanctuary of the same Pharaoh at the Temple of Abydos, same date.

No. 7.—A piece of *sandstone* from the quarries of Silsilis.

No. 8.—A piece of marble from the hill above the second cataract, Nubia.

No. 9.—Three Egyptian pebbles from the desert behind the pyramids of Saccara.

No. 10.—Pieces ancient pottery, probably funeral vases, from the Buck pyramid of *Dashoor*, Perring's French, very ancient, long previous to B. C. 2000.

No. 11.—Nine small and one large piece of petrified wood, from the petrified forests in the Eastern desert, near Cairo. There are three forests of this petrified wood: one about two hours ride from Cairo, eastward; one about four hours ride south eastward; one about seven hours ride beyond the others. Altogether, they cover a space fully equal to ten square miles. There are trunks of *trees* lying on the surface of the desert, (which is here hard gravel or rock,) of all dimensions. I measured one eighty-two feet long, and three feet in diameter, a large bamboo apparently. The palm trees, and others resembling pine and sycamore wood in

* The hieroglyphics are necessarily omitted.

grain, are immensely numerous. They seem to have been *all petrified standing, and then* fallen. The subject, however, requires a much more copious description than I can give at present, even if I possessed, which I am sorry to say I do not, the requisite geological knowledge.

No. 12.—One piece, being the *trunk* of a *desert shrub*, which has undergone a curious process of transition or petrifaction, being *turned into sand*. I picked it out with others where they had grown and were still in a *vertical* position, from the second cataract, Nubia. The same shrub was growing wild in the immediate vicinity, and I infer the transition to be recent and one constantly going on there.

No. 13.—Three pieces sculptured limestone, fragments found in 1839, by Perring, in an ineffectual attempt to penetrate into the sun-burned brick pyramid of *Dashoor*, Memphite Necropolis. They formed part of a non-shattered monolith sanctuary in the basement of the pyramid, and are amongst the *oldest* pieces of sculpture in Egypt. The date of this pyramid is thrown back into the night of early times, but the discovery of these fragments proved *two things:* 1st, That hieroglyphic writing was in use at the epoch of this pyramid; and that 2dly, the style of sculpture was correct and good, as also painting. This pyramid belongs to that remote period to which the rest are known to appertain, i. e. ages before 2000 B. C. I got them on the spot.

No. 14.—Petrified shells and bones from various parts of Egyptian hills and valleys, but chiefly (and especially the oysters and bones) from the valley of the wanderings "Wady et Tyh," between Cairo and the Red Sea, Eastern desert.

N. B. In offering the above *fragments* of *monuments* to the National Institution, it is necessary for me, who have reprobated so fiercely the habits of travellers in *chipping* Egyptian ruins to obtain specimens, to state that *all* these pieces were picked up from the ground, and were *not chipped off by me*. While their interest may perhaps be enhanced by the associations connected with the monuments of which they formed part, I only offer them to the National Institution as specimens of Egyptian geology.

Stones.—Each having (i. e. accompanied by) the name of locality. From Hadjan Silsilis, Mount Sinai, Wady Wurseyt, Gebel, opposite Manfaloot, Alabaster fragment from tombs of Memphis, Grotto at Gibraltar, Valley of the Wanderings Benihassan, Mount Sinai, Wady Menhale, Thebes, Desert Sinai, Ramlièych, Valley of Wanderings, Ruins of *Sais*, Mount Horeb, Ancient Granite Sluices, Canal of Sesostris between Red Sea and Nile, Suez, Basaltic Rock, bed of second cataract Nubia, Alabaster from quarry at Psinanla, Tel-el-Amarna.

One Nubian basket work tray or dinner table, Aswàn.

One piece of a beautiful mummy case I found the Arabs about to *burn* at Saccàra. I was not in time to save the rest, beyond half the cover.

One dromedary riding stick, Bishàrree Desert, Arabs, "Blemmyes," (?) Nubia.

Sacred ram's horns, tombs of Memphis.

One ostrich egg, Bishàrree Desert, Nubia.

One *mummied* crocodile, and a bundle of small mummied idem, brought out by me from the pit at "Margarat-es-Samoon," opposite Manfaloot. This extraordinary cavern runs along at about twenty feet below the surface to a distance I measured four hundred and thirty-eight feet. For an account of the dangers, imaginary as far as my experience goes, save of *fire*, see Legh's travels, St. John's Egypt and Mohammed Ali, and letters from the Old World, by a lady of New York. At the Academy of Natural Sciences of Philadelphia there are human skulls, &c., taken from the same spot.

One black leopard skin, from Abyssinia. It is in a wretched condition now from *moths*, and when I got it it had served as a cover for a dromedary saddle in a journey from *Gondar* to Khartoom and Cairo. The animal is *very rare*, never has been alive in Europe. Few skins have reached Europe. George IV had a pelisse of these skins sent him by the Ràs of Abyssinia, through Lord Valentia; two others were brought to Europe by the celebrated Rüppel. These are all I have heard of. In Abyssinia only the Royal Family dare wear them. It was from one of these last the skin now sent was procured in exchange for a gun.

Two sticks cut from trees in the Convent Garden, Mount Sinai.

One stick taken by me from the tomb of "Sheykh Henedic," salt lakes, isthmus Suez.

Twelve ancient porcelain idols, tombs of Memphis.

One piece, part of an ancient wooden sword, Memphis.

Two pieces, wooden feet and face, Memphis.

One double statue, a *modern* antique, manufacture of Thebes.

One piece of the sycamore tree under which tradition says "Joseph and Mary sat," Matereègch, Heliopolis. *The tree is old enough.*

Ancient wood, from the pyramid of five steps, Saccàra, perhaps as old as any in the world.

One piece of the wreck of the "Orient," burnt at the battle of Abookeer bay. It was fished up with other parts by the Engineer of the Diving Bell, 1838.

One ancient jar, tombs of Memphis. The sand contained in it is some I took from the temple of "Aboosimbel," Nubia, and is a fair sample of Egyptian and Nubian *desert* sand. This sand was quite pure when I got it; *all* the extraneous matter has got mixed with it in my boxes.

Two ancient palm-leaf sandals, from Thebes.

One ancient basket from a tomb at Thebes. It contains *ancient bread*, *ancient pomegranates*, and *ancient raisins*, and is at the very least as old as the commencement of the Christian era, but *may* be 4000 years old!

It is necessary to mention that I got *two* baskets at the tomb, one containing the *bread*, which is the one sent, and another with the fruit. I have taken out some of the bread for friends, and substituted fruit from the other basket. I should consider, from the specimens I have *seen*, that this bread *even now* is just as well flavored and as nutricious as the dyspeptic Graham bread.

One knife, the manufacture of and worn by the Negro nations on the "Bah-el-Abiard," White Nile.

One ancient wooden idol, seemingly a doll.

One piece Red Sea coral, one map of convent, both given to my sister in 1839, by the Prefect of St. Catharine, Mount Sinai, during her visit.

One *modern* Nubian Basket, Aswan, containing some wild desert seeds, Nubia, one colocynth, Red Sea Deserts.

Two skulls of *mummied* dogs, Abydos; two mummied snakes, Thebes; one mummied bird, Thebes; one mummied (?), Thebes—from their respective tombs.

Four or five unopened ancient jars, containing *mummied ibises*, from the pit near the pyramids of Abooseer, Memphis.

One box, containing unassorted *insects*, various parts of Egypt.

One tin case, containing *insects*, collected by a German Naturalist in Kordofan, Upper Nile.

One Egpytian fly flapper, date palm leaves, Cairo.

One Christian rosary, from Bethlehem, made of the *wood* of Mount of Olives, Jerusalem.

One Mahomedan rosary, from Cairo, made of the stone of a fruit from Mecca, Arabia. It is dyed all colors.

Two Egyptian pipe bowls, made at Aswàn, first cataract.

Fragments of *Coptic* and *Arabic* Christian missals, picked by me at the now ruined library of the Coptic Convent of "Amba Beshorri," during a dromedary excursion to the Natron Lakes, Western Desert, Lower Egypt. This library was ransacked at eighty years ago by the Bèdawee Arabs. These manuscripts are very old, and may date from any time subsequent to the invention of paper.

One bag, containing two kinds of *seeds* from Abyssinia. They were brought to Cairo, and given to me by the talented Abyssinian traveller, Monsieur Georges D'Abbadie, in the winter of 1840–1841, who requested me to distribute them for growth in America. One is called in Abyssinia "Nook," and is the seed from which the natives extract their *culinary oil*. The other, name unknown, is the seed of a plant, the *flower* of which is used in *medicating* the eyes by the Abyssinians. I send them to the National Institution as the most central for distribution to Southern gentlemen who may try to raise the plants. If any success attends such efforts, it is requested that notice may be sent to Mr. D'Abbadie, and to me.

One box, containing an assortment of Egyptian Geological specimens, being a portion of a large quantity of *unassorted* specimens presented by me to the Naval Lyceum, Brooklyn, with a request, that in the division, they would remember *one set* for Washington.

The above, contained in two boxes, have been delivered to Messrs. Masters and Markoe, of New York, who have kindly undertaken to forward them to the National Institution. GEORGE R. GLIDDON.

NEW YORK, *April* 14, 1842.

One Lizard, (*Tropidolepis,*) one Snake, (*Coluber,*) two Beetles, (*Scarabæus,*) one Terrapin, (*Emys.*)—*From Mr. Pierce, Columbian College.*

Totanas macalarius.—*From John T. Given.*

Quiscalus versicolor.—*From S. B. Sherwood.*

Two (live) Black Snakes, (*Coluber constrictor.*)—*From Wm. Waters.*

Four specimens of Silver Ore from Mexico.—*From*

Specimen of Ospergillum vaginiferum, valve of an Ostrea.—*From Dr. H. King.*

Indian Arrow-heads from the vicinity of Potomac Creek, Virginia.—*From Henry Byrne.*

Coin, antique.—*From Wm. Kemble, Esq., New York.*

Copper Coins.—*From A. T. Cavis.*

Specimen of Potomac Marble.—*From Martin Johnson.*

Copper Coins.—*From David Myerle, Kentucky.*

Fine Grass or Silk Bark, two Birds' Eyes, (fine.)—*From Joseph K. Stapleton, Baltimore.*

One Snake, (*Coluber,*) one Owl, (*Strix,*) one Adder, (*Heterodon.*)—*From*

For the Library.

Sixth Geological Report to the Twenty-Fourth General Assembly of Tennessee.—*From G. Troost, M. D., Nashville, Tenn.*

First and Second Exhibition of the Massachusetts Charitable Association.—*From J. J. Greenwood.*

Two copies of Professor Hitchcock's Address before the Association of American Geologists.—*From Dr. H. King.*

Insurance Abstract for 1841, (two copies;) Bank Abstract for 1841; Ninth Annual Report of the Trustees of the State Lunatic Hospital; Fourth Annual Report of the Board of Education; Report on Fishes, Reptiles, and Birds of Massachusetts; Report on the Herbaceous Plants and the Quadrupeds of Massachusetts; Report on the Invertebrated Animals of Massachusetts; Report on the Insects of Massachusetts injurious to Vegetation; Report on the Agriculture of Massachusetts.—*From the Commonwealth of Massachusetts.*

Nouveaux Memoires de l'Academie Royale des Sciences et Belles Lettres de Bruxelles, tome xiv, 1841, quarto.—Memoires Couronnés par l'Academie Royale de Bruxelles, tome xv, 1re parte, 1840, 1841, quarto.—Bulletins de l'Academie Royal des Sciences, from January to August, 1841.—*From the Royal Academy.*

Treatise on the Breeding of Animals, &c., by James Glenn; Utica, 1842.—*From the Author.*

Two manuscript Catalogues of Count Castelnau's Insects.—*From Joseph Delafield.*

Emporium of Arts and Sciences, conducted by John Redman Coxe; Philadelphia, 12 Nos., from May 1812 to April 1813, inclusive.—Practical Observations on Vaccination, by J. Redman Coxe; Philadelphia, 1802.—Appeal to the Public, &c., &c., by the same, 1835.—Observations, &c., on the Cholera, in Philadelphia, 1832.—Esculapian Register; Philadelphia, 1824.—*From John Redman Coxe, M. D.*

Memoir on the Cotton of Egypt, by Geo. R. Gliddon, late U. S. Consul at Cairo; London, October, 1841.—An Appeal to the Antiquaries of Europe on the Destruction of the Monuments of Egypt, by the same, 1841.—Laws and Regulations of the Egyptian Society of Cairo.—Fifth Report of the Egyptian Society.—*From George R. Gliddon, one of the founders of the Egyptian Society.*

Annales de l'Institut d'Afrique, October, 1841, and February, 1842.—*From H. Wheaton, U. S. Minister to Prussia.*

Meteorological Observations, by B. B. Brown, M. D., St. Louis, March, 1842, (in the Daily Evening Gazette, April 4, 1842.)—*From the Author.*

On the Sense of Hearing, by W. Sidney Green, M. D., Memphis, Tennessee, (in the Appeal, April 22, 1842.)—*From the Author.*

Nueva Systema Mineral del Señor Barcelis, 1825, (translated with notes by Andrés del Rio; Mexico, 1827.)—Rapport fait a l'Academie des Sciences de Paris, 1821, par Cuvier, sur un Ouvrage de M. J. Victor Andonin ayant pour litre "Recherches Anatomiques sur le Thorax des Animaux Articulés et celui des Insectes en particulier;" Paris, 1823.—Geological Plates, illustrating, 1st, the Jura formation; 2d, Isocardia Humboldtii, Calymene macropthalma; 3d, Aspugillum Leognanum.—*From Joseph Delafield.*

Large Box of Books, chiefly Entomological, valued at $500, to be deposited in Library of National Institution, if not sold to Congress, to which it has been offered, (list sent to Committee on the Library of Congress.)—*From Count Castelneau.*

Memoir of the Fossil Reptiles of the southeast of England, by Dr. Mantell.—*From*

An account of the Magnetic Observatory and Observations at Washington City, with a drawing and description of the Declination Magnetrometer, by Lieutenant J. Melville Gilliss, U. S. Navy.—*From the Author.*

Letters and Communications.

From Stephen Taylor, Muscoday, Wisconsin, September 9, 1841: Accompanying a box of Shells, from Wisconsin river.

From Mr. Brown, vice Consul, U. S., Manilla, Nov. 13, 1841.

From J. C. Pickett, U. S. Chargé d'Affaires, Lima, December 18, 1841.

From Richard Pollard, U. S. Chargé d'Affaires, Chili, January 11, 1841.

From W. W. Hodgson, U. S. Consul, Tunis, March 1, 1842: Presenting one hundred ancient coins, with observations on the subject. Will forward others, &c.

From W. L. Wharton, Surgeon, U. S. Army, to W. W. Seaton, Fort Leavenworth, March 17, 1842: Enclosing a letter from Capt. N. Boone, 1st Dragoons, relating an incident in the life of the celebrated Daniel Boone, his father, and presenting an old knife used by Boone, of which an account is given in the letter.

From F. Russell, Consulate of Laguna, March 18, 1842: Alluding to a former letter, in which he says, he stated that he had forwarded for the Institute, per ship Eliza and Susan, the broken fragments of a tablet from the ruins of Palenque; and adding, that he has forwarded by the Gil Blas, a portion of the same, which now makes the tablet complete.

From Wm. Simms, London, March 30, 1842.

From E. Custis, 1st Lieutenant First Dragoons, to Colonel Abert, Fort Wayne, April 4, 1842: Has sent, via New Orleans, an otter and some birds prepared by himself for the Institute. Will forward other objects, &c.

From Joseph Delafield, New York, April 10, 1842: Enclosing bill of lading for Castelneau's books, and insurance on $500, and two manuscript catalogues of his insects—offering several presents from himself.

From A. H. Palmer, New York, April 12, 1842.

From George R. Gliddon, ex-Consul U. S. Cairo, Egypt, New York, April 14, 1842: Forwarding two boxes of presents, (of which he encloses a list,) &c., &c.

From Henry H. Williams, Baltimore, April 15, 1842: Enclosing bill of expenses on box of shells from S. Taylor, Muscoday, viz: $4 68.

From Masters, Markoe & Co., New York, April 16, 1842: Enclosing bill of lading for two boxes, &c.

From Hon. George W. Toland, House of Representatives, April 22, 1842: Enclosing letter from George Ord, Librarian of American Philosophical Society, Philadelphia, stating that there is a parcel for the Institute in his hands ready to order.

From O. P. Hubbard, Dartmouth College, April 22, 1842.

From T. S. Brown, Dunkirk, April 18, 1842.

From Townsend Ward, Philadelphia, April 22, 1842.

From Peter S. Duponceau, President of the American Philosophical Society, Philadelphia, April 27, 1842: Remarks on the National and Smithsonian Institutions.

From E. C. Herrick, New Haven, Conn., April 25, 1842.

From James C. Booth, Professor of Chemistry, Franklin Institute, Philadelphia, April 28, 1842: Suggesting the importance of commencing a collection to illustrate the advancement and present state of the chemical arts, &c., &c., &c.

From George R. Gliddon, ex-Consul, Cairo, Washington, May 6, 1842: Transmitting copy of Laws and Regulations of the Egyptian Society of Cairo, and proposing correspondence between it and the National Institution; and presenting two works from his own pen.

From A. H. Palmer, New York, May 6, 1842.

Dr. King, Curator, read a letter addressed to him by Geo. Engelmann, St. Louis, April 15, 1842; which was referred to the Corresponding Secretary.

Stated Meeting, June 13, 1842.

Professor W. R. Johnson addressed the meeting on the subject of the explosion of steam boilers, and the means of prevention.

Professor Espy addressed the meeting on the subject of his caminator or conical ventilator, and exhibited some experiments.

The Hon. Mr. Preston of the U. S. Senate then rose and made an eloquent speech, in which he descanted at length on the history and labors of the Institute, what it had done, and what it proposed to do, its capacity to be eminently useful to the country, if properly sustained by the country and Congress, the advantage of uniting the Smithson Institution with it, &c., &c., and appealed to Congress, and to the liberal citizens of the United States, to come forward in aid of a glorious cause, and in accomplishment of the great national objects which the Institute has in view, &c., &c.

The Corresponding Secretary announced the following contributions and deposites:

For the Cabinet.

Marble Bust of Mr. Poinsett, by Pettrick.—*From Mrs. Poinsett.*

Mass of Iron Ore, from the Iron Mountain in Missouri.—*From Mr. Zeigler.*

Specimen of Marl and Fossils from Prince George's County, Maryland.—*From Joseph Willet.*

One Frog, (*Rana pipiens;*) One skeleton of a bird, (*Hirundo;*) One Craw Fish, (*Astacus;*) One skin (imperfect) of a Rattlesnake, (*Crotalus.*)—*From Martin Johnson.*

Five Copper Coins.—*From Thomas Birch, Jr.*

Two Poisonous fangs of the blowing viper, (*Heterodon.*)—*From Ed. Stabler, Maryland.*

One specimen of Serpentine, one specimen of Sulphate of Iron in Slate, one specimen of Selenite.—*From J. J. Greenhough.*

One Snake, (*Coluber amœnus.*)—*From John Smith.*

One Chair, part of the furniture of General Washington whilst President of the United States.—*From Joseph Harbaugh.*

Seven Pieces of Copper Coin.—*From J. J. Greenhough.*

Skin of a Tiger Cat, (*Felis cerval;*) Skin of a Boa Constrictor.—*From J. J. Drake, New York.*

Bunch of Grapes curiously grown in a phial.—*From G. Gallant.*

Mexican Spur, taken from the foot of a Mexican soldier, slain at the battle of San Jacinto, by Col. J. Taylor, of Alabama.—*Deposited by Judge Bryan.*

Alligator, (*Crocodilas lucius,*)—*From Col. H. Whiting, U. S. A.*

Fossil Wood, from deep cut on Baltimore and Washington Railroad. —*From Joseph Willett.*

Five Pieces of Coin.—*From A. W. Deorselling.*

One specimen Icterus baltimore, one specimen Icterus agripennis, one Picus erythrocephalus.—*From J. H. Fowler.*

Tringa Wilsonii.—*From J. T. Given.*

Cypselus pelasgius.—*From Mr. Johnson.*

White Racoon Skin, (*Procyon lotor,*) from the Rocky Mountains.—*From W. B. Todd.*

The following Fossil and other Casts.—*From Professor J. Locke, of Cincinnati.*

4 Isotelus megistos, *Adams Co., O.*
3 " " *Cincinnati, O.*
1 " " *Warren Co., O.*
2 " gigas, *Covington, Ky.*
2 " " *Cincinnati, O.*
1 " megistos, *Maysville, Ky.*
1 " undetermined, *Cincinnati, O.*
1 Calymene Blumenbachii, *Dudley, Eng*
2 " Senaria, *Springfield, O.*
2 " " *Richmond, O.*
1 " " *Cincinnati, O.*
1 " Downingiæ, *Dudley, Eng.*
3 Triarthus Beckii, *Newport, Ky.*
1 Cryptolitus tessellatus, *Newport, Ky.*
1 Dupleura Dekayi, *Lockport, N. Y.*
2 Strophomena alternata, *Cincinnati, O.*
1 Asaphus tuberculatus, *Springfield, O.*
1 " caudatus, *Cincinnati, O.*
3 " undetermined, *Columbus, O.*
1 " " *Louisville, Ky.*
2 Large mouth piece of Isotelus megistos, *Cincinnati, O.*
1 Trilobite, undetermined, *Lockport, N.Y.*
4 " " *Springfield, O.*
1 " " *Cincinnati, O.*
1 Bilobite fucoid, *Cincinnati, O.*
1 Pentamerus oblongus, *Preble Co., O.*
2 Pentamerus oblongus, *Springfield, O.*
1 " " *Maquokata Riv. Iowa.*
1 Lingula, *Cincinnati, O.*
1 Orbicula, *Hamilton Co., O.*
1 Atrypa testudinaria, *Brown Co., O.*
" (undetermined,)
1 Bivalve resem'g unio, *Cincinnati, O.*
1 " " " *Mouth of Licking River, Ky.*
2 Fucoides, *Covington, Ky.*
2 " *Cincinnati, O.*
1 " *Mason, O.*
1 " *Adams Co., O.*
2 " Cauda-Galli, *Scioto Co., O.*
1 " Harlani, *Alle'y Mountains.*
1 Pterina carinata, *Cincinnati, O.*
1 " " *Richmond, Ind.*
1 Shell resem'g Gryphea, *Columbus, O.*
1 Diluvial grooves, *near Dayton, O.*
1 Star coral, *Cincinnati, O.*
1 Cornularia quadrisulcata, *Richmond, Ia.*
3 Apocrinites reticulata, *Cincinnati. O.*
9 Impression of coal vegetables, *Muskingum Co., O.*
1 " " " *Rushville, Il.*
1 Apocrinites reticulata, *Little Miami, O.*

For the Library.

Letter from the Secretary of the Treasury, transmitted in obedience to a resolution of the House of Representatives, of 29th June, 1838, Doc. No. 21, 3d Session, 25th Congress.—*From Hon. Levi Woodbury.*

Discourse delivered before the Historical Society of Pennsylvania, 1842, by Job R. Tyson.—*From the Author.*

The President of the United States, Patron of the Institute, deposited the full length likeness of M. Guizot, executed by Mr. Healey,

for the Americans in Paris, and transmitted by them for the purpose of being hung in the Hall of Representatives, as a pendant to that of Washington.

Mr. Robert Greenhow exhibited several living specimens of the brilliant large fire-fly of the Island of Cuba, which he presented to the Institution.

It was announced that the Spagnoletto Picture, (Job and his Comforters,) presented by Dr. Gibbs, of Columbia, South Carolina, had been repaired and framed, and hung up in the Hall.

Adjourned Meeting, June 20, 1842.

The Corresponding Secretary announced the following contributions and deposites:

For the Cabinet.

Stalactite from the Cherokee Nation.—*From Mrs. George Clarke, of Georgetown.*

Specimens of Colored Woods, &c., as follow.—*From Capt. George W. Hughes, Top. Engineers.*

1 A veneering of colored and polished Plane tree on common white pine.
2 A sample of Apple tree wood, colored but not polished.
3 Do. Pear " " " "
4 Do. Willow " " " "
5 Do. Beach tree wood colored and varnished.
The above specimens prepared according to Weissen Creech's, an improvement on Boucherie's process for the preservation and beautifying of timber.
6 Samples of felt cloth, manufactured at Leeds, after an American Patent.
7 Specimens of *bois de bout*, employed in the construction of road-ways, bridge floors, and economic railroads, at mines and manufactories.
Model of the rail and fastenings used on the Annapolis railroad.
Bateau a vapeur pour naviguer sur les canaux et les riviéres, par Ad. Le Hardy de Beaulieu, Ingenieur Civile à Siege.

Box of Minerals, &c., &c.—*From Usher Parsons, M. D., Providence, R. I.*

For the Library.

Laws of the Society for the Advancement of Horticulture in Russia, 6th edition, Berlin.—List of the members of the above Society at the end of December, 1840.—Transactions of the same, No. 30, with engravings, vol. 15, part 1, 1840; No. 31, vol. 15, part 2, 1841.—*From the Society.*

Richerche intorno all' Applicazione delle Machine locomotive ai piani Inclinati della Strade di Ferro. Memoria dell' Ingegnere Giovani Arcari, Venezia, 1841.—*From the Author.*

Proceedings of the American Philosophical Society, vol. 2, No. 21, January, February, March, and April, 1842.—*From the Society.*

Onzieme Rapport Annuel sur les Travaux de la Societé d'Historie Naturelle de l'Ile Maurice, 1841.—Sur le Decroissement des Fôrets à l'Ile Maurice, read before the Society of Natural History of the Island of Mauritius, 1838.—*From the Society.*

Meteorological Observations, by B. B. Brown, M. D., St. Louis, May, 1842.—*From Dr. Brown.*

Annales de l'Institut d'Afrique, Nos. 2 and 3, February and March, 1842.—*From H. Wheaton, American Minister, Berlin.*

Large Box, containing Castelneau's collection of Books on Natural History, deposited by him.

The Corresponding Secretary, reported, that thirty-five Societies and Institutions in foreign countries had been added to the list of correspondents of the National Institution; and submitted a list of their titles, and a copy of the letter addressed to them, with the sanction of the President of the Institution.

At page 143 of the Second Bulletin of our proceedings will be found a list of foreign Institutions, (one hundred and nine in number,) whose correspondence has been solicited, making in all, (exclusive of Societies in the United States,) about one hundred and fifty principal Scientific Societies, in various parts of the world, with whom the National Institute has proposed correspondence and exchanges of transactions, &c.

Letters and Communications.

From F. Klotzsch, Secretary of the General Society for the Advancement of Horticulture in the Prussian States, Berlin, January 12, 1842: Thanking the Institute for documents transmitted, and transmitting in return the transactions, &c., of the Society, for 1840, 1841, vol. 15, parts 1 and 2.

From George Moore, U. S. Consul, Trieste, February 2, 1842: Accompanying a pamphlet by the Civil Engineer, Giovanni Arcari, (employed in constructing a great dyke to receive vessels at Venice,) on the subject "of the Feasibility of Propelling Locomotives up Inclined Planes," with a request from the Engineer that the National Institute would give an opinion upon it.

From the same, May 5, 1842: Sending to the Institute a collection of shells given him by Mr. Tomassini, a distinguished botanist, of which a list is enclosed; and promising to forward botanical collections.

From J. M. Marston, U. S. Consul, Palermo, March 28, 1842.

From J. M. Marston, U. S. Consul, Palermo, March 20, 1842: Acknowledging letters, &c. Duke Serra di Falco, has presented his work on the Siculo Norman Churches to the Institute—stating that he is collecting minerals, &c., for the Institute.

From Duke Serra di Falco, Palermo, March 7, 1842: Acknowledging membership, &c., and presenting his work on the Siculo Norman Churches.

From General C. Tcheffkine, Major General of Engineers of the Russian Mines, St. Petersburg, March $\frac{1}{13}$, 1842.

From C. T. Tod, U. S. Minister, St. Petersburg, March 25, 1842: Stating that he will forward specimens of the national mines of Russia, presented by General Tcheff'kine. Has presented letters, &c., addressed to Admiral Krusenstern, &c.

From G. K. B. Horner, Surgeon U. S. Navy, Rio de Janeiro, April 5, 1842.

From George Englemann, M. D., St. Louis, Mo., to Dr. King, April 15, 1842: Has forwarded collection of rare plants of the United States, France, and Germany. Suggesting connection and exchanges between the National Institute and the Societies of the United States.

From A. H. Palmer, American and Foreign Agency, New York, May 6, 1842: Acknowledging letters and bulletins, &c., and proposing several distinguished individuals and societies in foreign countries as correspondents.

From the same, May 26, 1842.

From H. J. Rogers, Baltimore, May 9, 1842.

From J. H. Causten, Jr., Washington, May 16, 1842.

From E. D. Mansfield, Cincinnati, May 20, 1842.

From Capt. G. W. Hughes, Topographical Engineers, Washington, May 17, 1842: Presenting to the Institute various specimens, of which a list is enclosed.

From E. Watmough, Philadelphia, May 25, 1842.

From Senhor Luiz Henriquez Ferreira d'Aquiar, Consul General of Brazil, New York, May 31, 1842.

From Dr. E. Foreman, Baltimore, May 31, 1842: Acknowledging letters, and enclosing a letter from Dr. Screven, of Savannah, on the subject of the fossil bones discovered by him, and suggesting that an application to him might secure these rare specimens for the Institute.

From Burr, Jones & Co., New York, (circular:) Respecting the patent omnigraph machine.

From Usher Parsons, M. D., Providence, Rhode Island, April 30, 1842: Accompanying a box of specimens.

From Peter S. Duponceau, Philadelphia: On subject of Institute, and suggesting a memorial to Congress to identify the Smithsonian and National Institutions.

From A. H. Palmer, New York, June 9 and 10, 1842, (two letters:) Acknowledging letters and circulars. Will aid in forwarding documents, &c., to societies in foreign countries, &c.

From Baron Lederer to Mr. Poinsett, New York, November 1, 1841: Offering his collections to the National Institute, on moderate terms.

From F. Russell, U. S. Consul, Laguna, Mexico: Has forwarded specimens from the ruins of Palenque.

From J. H. Causten, Washington, June 13, 1842: Presenting specimens, (list enclosed.)

From James Laurenson, Baltimore, June 14, 1842: Asking for a report of transactions of the meeting of 13th instant, for publication in the Baltimore Sun.

From the Leopold Caroline Academy of Naturforscher, Breslau,

December 24, 1841: Acknowledging constitution, &c., and accepting correspondence of National Institute.

From P. S. Duponceau, Philadelphia, June 13, 1842.

Mr. Markoe offered the following resolutions, which were adopted:

Resolved, That the thanks of the National Institute be presented to the Hon. W. C. Preston, for the eloquent address made by him at the stated meeting of the 13th instant; and that he be requested to furnish to the Institute a copy of his remarks, for the purpose of publication.

Resolved, That the Secretary of War be asked to address a circular to the officers of the Army, in behalf of the National Institute, and to request their aid and co-operation in carrying out its objects; and that the officers of the military posts and stations be specially requested to establish cabinets, to receive and preserve all contributions that may be received for the Institute.

Resolved, That the Secretary of the Navy be asked to address a circular to the officers of the Navy, in behalf of the National Institute, and to request their aid and co-operation in carrying out its objects; and that commanders of all ships of war about to proceed to foreign stations, be permitted and desired to establish cabinets on board their vessels, for the purpose of receiving and preserving contributions for the Institute.

Mr. Couthouy addressed the meeting on the subject of coral formations and oceanic temperatures, and offered the following resolution, which was adopted:

Resolved, That a Committee be appointed to confer with the honorable the Secretary of the Navy, and solicit him to take measures for having a connected series of observations made by our national vessels, especially those on the African and East Indian stations, upon oceanic temperatures at the surface, and to a certain depth; and, also, to communicate such observations to this Institute as early after the return of the vessels from each cruise as convenient.

Mr. Preston moved that Lieut. Wilkes be requested to give the meeting some account of the late cruise of the Exploring Expedition.

Mr. Wilkes accordingly arose and addressed the meeting at length, exhibiting various maps and drawings, in illustration of the narrative, &c.

On motion of Mr. Preston, it was

Resolved, That the thanks of the Institute be presented to Lieut. Wilkes, for the lucid exposition of the objects and events of the Exploring Expedition, with which he had favored the meeting.

Resolved, That Lieut. Wilkes be requested to continue the exposition begun this evening.

Resolved, That Lieut. Wilkes be requested to furnish the Institute with such a succinct account or memoir of the Expedition, as in his discretion may seem proper for present publication.

Mr. Wickliffe addressed the meeting, and said he thought the report first due to the Government, &c., &c.

Mr. Preston advocated and explained his resolution, saying, that the objects of the Expedition were public; but, at the same time, distinctly disclaiming any intention to trench upon the official rights of any one, &c., &c.

The Hon. Mr. Upshur, Secretary of the Navy, said that he could not perceive the slighest impropriety in Mr. Wilkes giving a synopsis of his cruize, confiding fully in his discretion and judgment that he would not publish anything that it might be found proper to withhold.

Mr. Preston said he never doubted that his distinguished friend at the head of the Navy Department would give his powerful aid to the advancement of science, and the gratification of the eager and enlightened curiosity of the public.

Mr. Upshur replied, and further stated his views.

Mr. Wickliffe explained his motives in having opposed the motion, and commented very favorably on the results of the Expedition, and was happy to find that no objection existed to render the publication of the narrative improper.

Mr. Couthouy remarked, that it was customary for the commanders of expeditions to make a synopsis, on their return, for publication.

Mr. Upshur then proposed the following Resolution, which was adopted:

Resolved, That Lieut. Wilkes be requested to furnish for the use of the Institute, a succinct statement of the remarks made by him this evening, and to be continued on another occasion, respecting the movements of the Exploring Expedition, or such other general view of the progress and results of the Expedition as to him shall seem proper.

Special Meeting, June 23, 1842.

A large audience being present, Lieut. Wilkes continued his narrative.

Special Meeting, June 27, 1842.

A large audience being present, Lieut. Wilkes concluded his narrative of the discoveries and other events of the Exploring Expedition, illustrating his remarks by many charts and drawings.

On motion of the Hon. Levi Woodbury, it was unanimously

Resolved, That the thanks of the meeting be presented to Lieut. Wilkes, for his interesting synopsis of the cruise of the Exploring Expedition.

Stated Meeting, July 11, 1842.

The Curator announced the following donations, &c.

For the Cabinet.

Several specimens of Craw Fish, (*Astacus affinis;*) one Snake, (*Coluber sipedon.*)—*From John Easby.*

Fish from the Potomac.—*From J. B. Belt.*

One Jar of Huano or Fertilising Earth, Seeds of the Nectarine and Damascus Plums, seeds of Water Melon, Custard Apple—all from Chili.—*From J. H. Causten.*

Copper made at Mine La Motte, Missouri.—*From C. C. Ziegler, St. Genevieve, Mo.*

One Ground Cricket, (*Gryllus,*) from South Carolina.—*From Mr. Skinner.*

Three specimens of flexible Coral, (*Gorgonia.*)—*From John Hunt.*

Eleven pieces of Coin.—*From J. P. Couthouy.*

Two Notes, (1840 and 1841.)—*From Charles H. James.*

One Note, of the City of Macon, Georgia, 1840; Nankeen Cotton, from Alabama, (*Gossypium.*)—*From A. C. Van Epps.*

One Young Eagle, (living,) (*Falco leucocephalus,*) Florida.—*From James Hudson, Secretary of the British Legation.*

Miniature of General Harrison, copy of an original in possession of Mr. Villard, Georgetown, D. C.—*Deposited by the Painter, Miss Mary Thomas, Georgetown.*

Seven Paintings, viz: Child and Dog, by Bernhard; copy of Madonna della Sedia; —— ——; Gamblers, copy from Carravaggio; Madonna and Child, Sassaparata; two views in Venice.—*Deposited by Mrs. Poinsett.*

One large Lemon Tree, one Cactus.—*From Dr. McWilliams.*

Zinc Ore, from Franklin Furnace, Essex County, New Jersey.—*From W. L. Ames, through Oliver Whitney.*

One Snake, (*Heterodon.*)—*From W. M. Maddox, Prince George's Co., Maryland.*

One specimen of curiously marked Wood.—*From Wm. Easby.*

Three Turtle's Eggs, (*Emys.*)—*From Master Force.*

Three Butterflies, (*Bombyx.*)—*From J. C. McGuire.*

Statue of Washington, by Pettrich.—*From Mr. Pettrich.*

Medallion head of Cabot, from a design by Chapman.—*From Chas. Gill.*

The following Minerals, &c.—*From Rev. Mr. Curly, Georgetown College.*

7 (Volcanic) Minerals, from Vesuvius.	1 Ancient Native Head.
2 Specimens of Serpentine.	1 Lachrymatory Vase.
2 " Red Porphyry.	Several Copper Coins.
1 " Italian Granite.	Rock Plant.
2 " Ancient Roman Glass.	Piece of Desmoid tissue (tanned) of Negro.
1 Ancient Roman Plate.	
1 " Lamp.	2 Catalogues of Instruments.

Twenty-six Green-house Plants, in pots.—*From Samuel Feast, Baltimore.*

For the Library.

Pamphlet on Steam Navigation.—*From E. F. Aldrich, New York.*

One Paper, said to be owned by one of those persons executed in France, in 1686, for their religious belief.—Three volumes antique.—*From Johnson Elliott.*

Address of the Hon. B. A. Bidlack, M. C., on the History of Wyoming Valley.—*From the Author.*

History of the Revolution in Europe, by Andrew Chrighton.—The Unique, or Biography of Distinguished Characters.—*From Martin Johnson.*

On motion of Dr. King, it was

Resolved, That the Department of Natural History be authorized to procure such living specimens of natural history as they may think desirable, as the commencement of a collection for a zoological garden: *Provided*, The same may be done free of expense, except that of transportation.

Mr. J. P. Couthouy, Dr. H. King, and Mr. J. J. Greenough, were appointed the committee to confer with the honorable the Secretary of the Navy on the subject of oceanic temperatures, agreeably to the resolution of Mr. Couthouy, adopted at the last stated meeting.

Mr. Poinsett, President of the Institute, announced that arrangements had been made to publish a synopsis of the cruise of the Exploring Expedition, under the command of Lieut. Wilkes.

Lieut. Gilliss presented the Meteorogical Journal kept at the Observatory, Capitol Hill, during the months of April, May, and June, 1842; also, monthly means of the bi-hourly observations of the magnetic declination, barometer, and thermometers, made at the Observatory, Washington City, during the year 1841, by Lieut. Gilliss; which were referred to the Department of Natural Philosophy.

On motion of Col. Abert, it was

Resolved, That the Treasurer be requested to furnish at the next stated meeting, a list of members who have not paid their dues, &c.

A committee of publication was appointed, consisting of the President of the Institute, and a member from each of the Departments.

Stated Meeting, August 8, 1842.

The Corresponding Secretary announced the following contributions and deposites:

For the Cabinet.

Collection of Cerealia, cultivated in the Imperial Botanic Garden of St. Petersburg, 1840, (109 packages, numbered with reference to the printed pamphlet which accompanied them.) The several Catalogues of Seeds offered by way of exchange at the Botanic Garden.—*From Professor Fischer, Director.*

Box of Shells.—*From Geo. Moore, U. S. Consul, Trieste.*

Exuvia of a Snake (perfect) found near Dade's battle ground, Florida; box of Red Cedar, growth of Anuettee Laiggee, East Florida; Bedouin Sabre.—*From J. Henshaw Belcher, Philadelphia.*

Specimens from the Mines of New Grenada.—*From Colonel Joachin Acosta, Chargé d'Affaires of New Granada.*

1. Gold Ore, from a rich gold mine in Anory, (Province of Antioquia.)
2. Silver Ore, silver mine, (Province of Mariquito.)
3. Emerald, six sided prism.
4. Emerald, eight sided prism, from Muso, (Province of Veles,) from the Mines.
5. Native Gold, a lump (pepeta) from the Alluvion of Marinilla washings, (Antioquia.)

For the Library.

Epitome dé Volumi Ercolanesi, pel Cav. Lorenzo Blanco, duod. Napoli, 1841.—*From the Author.*

1. Carta Geognostica de los Principales Districtos Minerales del Estado de Mexico, (by F. de Gerolt, &c.)—2. Explication de los Principales Formaciones de Rocas, (by the same.)—3. Indicacion de los Formaciones de Rocas de los Vetas y Criaderos Metaliferos, (by the same.)—4, 5, and 6. Perfiles Geognosticus de los Principales Districtos Minerales del Estado de Mexico, (by the same.)—Carta Geognostica, &c., &c., &c., quarto, Boun, 1828, (by the same.)—*From the Author, Russian Minister in Mexico.*

Sobre las fuerzas electro-quimicas, por el Professor Jose Manuel de Herrera, Mexico.—*From the Author.*

De una Galena Particular, por Andres del Rio, Mexico.—*From the Author.*

Seventh Catalogue of Seeds offered by way of Exchange at the Imperial Botanic Garden of St. Petersburg, to which are appended some Botanical notices; St. Petersburg, 1840, (in Latin.)—Centenary Fête of Charles de Linnæus, celebrated by the Impe-

rial Society of Naturalists, of Moscow, on June $\frac{24}{12}$, 1825; Moscow, 1835, (in French.)—Upon a Manuscript of hitherto unknown origin in the possession of St. Vladimir University at Kiev, by Von Koeppen, (in German,) extracted from the "Bulletin Scientifique;" St. Petersburg, vol. vi., No. 13, (in German.)—Disquisition on the Vessels in Insects, termed Hepatic or Biliary, by G. Fischer de Waldheim; St. Petersburg, 1838, (in French.)—Certain Apterous Genera of Locusts, submitted to a fresh examination, by the same; Moscow, ? 1838, (in Latin.)—Microscopic Observations on the different Organic Bodies contained in the Transparent Parts of Flint, (in Russian,) translated from the German; St. Petersburg, 1838.—Short notices of the Natural Wonders of North America, compiled by Charles Cramer, in 2 parts, part I, 1837; II, 1840; St. Petersburg, (in German.)—Elucidation of the Composition of Chemical and Mineralogical Formulæ, and the Calculation of other Atomic Relations, by Nils Von Nordenskiöld; St. Petersburg, 1837, (in German.)—Essay on the Method of Treating Metalic Ores, by Christian Schrift, translated from the German; St. Petersburg, 1837, (in Russian.)—Contributions to an acquaintance with the Organic remains of Cupriferous Sandstone on the Western Declivity of the Ural, by Dr. Stephen Kutorga; St. Petersburg, 1838, (in German.)—Report upon the several species of Grain and their Varieties, raised at the Imperial Botanic Garden, at St. Petersburg, in 1836, (in German.)—Do. in 1837.—On the Apophysis or Opeous Framework of the Terebratula, by G. Fischer de Waldheim; Moscow, 1829, (in French.)—Letter on the Genera Xeranthemum and Chardinia, addressed by F. E. L. Fischer and C. A. Meyer to G. Fischer de Waldheim, Director of the Imperial Society of Naturalists at Moscow, with two plates, *loose*. (This letter is in French, and the description of the plant is in Latin.) Extracted from the 4th vol. of the new Memoirs of the Imperial Society of Naturalists, at Moscow, printed at St. Petersburg, 1836.—*From Charles Cramer, Secretary (pro tem.) of the Imperial Mineralogical Society of St. Petersburg, and from Professor Fischer, Director of the Imperial Botanic Garden at St. Petersburg.*

A work in Arabic, beautifully printed.—*From J. Coppinger, New York.*

Annals of the Lyceum of Natural History of New York, vols. 1, 2, 3, and Nos. 1, 2, 3, and 4, of vol. 4, (from 1824 to 1837, embracing all that has been published.)—*From the Lyceum.*

A Manual of Gold and Silver Coins of all Nations struck within the past century, showing their history and legal basis, and their actual weight, fineness and value, chiefly from original and recent assays; with which are incorporated Treatises on Bullion and Plate, Counterfeit Coins, Specific Gravity of Precious Metals, &c.; with recent statistics of the Production and Coinage of Gold and Silver in the world, and sundry useful Tables; by Jacob R. Eckfeldt and

William E. Du Bois, assayers of the Mint of the United States, illustrated by numerous engravings of coins, executed by the medal-ruling machine, and under the direction of Joseph Saxton, of the United States Mint; Philadelphia, 1842, quarto.—*From the Authors.*

Memorial (to the Senate) of Joshua Leavitt, praying that in the revision of the tariff laws, the principle of discrimination may be inserted in favor of those countries in which American grain, flour, and salted meat, are admitted duty free, February 25, 1841.—*From Mr. Leavitt.*

Fifty-Fifth Annual Report of the Regents of the University of the State of New York, (made to the Legislature, March, 1842; Albany.)—*From*

Del Duomo de Monreale, e de altre chiese Siculo Normanne, &c., per Domenico Lo Faso Pietra Santa, Duca di Serra di Falco, Socio di varie Academie; Palermo, 1838, folio, (with splendid illustrations.)—*From the Author.*

Berliner Gewerbe, Industrie, und Handelsblatt, Nos. 12, 13, 14, 15, 16, and 17, May, 1842.—*From Henry Wheaton, American Minister at Berlin.*

Discourse delivered before the Historical Society of Pennsylvania, on the Colonial History of the Eastern, and some of the Southern States, by Job R. Tyson, one of the Vice Presidents; Philadelphia, 1842.—*From the Author.*

Proceedings of the Academy of Natural Sciences of Philadelphia, vol. 1, Nos. 11, 12, 13, and 14, February, March, April, and May, 1842.—*From the Academy.*

Baccalaureate Address delivered at the Annual Commencement of Geneva College, August 4, 1841, by B. Hale, D. D., President.—*From the Author.*

The United States Literary Advertiser, Publishers' Circular and Monthly Register of Literature and Art, No. 11, vol. 1, May, 1842; Nos. 13 and 14, (new series,) July and August.—*From the Publishers.*

The Home Book Circular, a Quarterly Journal of Literature; New York, June, 1842, vol. 1, No. 2.—*From D. Appleton & Co.*

Ordinances, Rules, and Regulations, respecting the Public Schools in the City of Louisville, Kentucky, 1835.—Act of Incorporation, and Constitution and By-Laws of the Kentucky Historical Society, organized March, 1838; Louisville, Kentucky.—*From the Society.*

Letters and Communications.

From Chev. Lorenzo Blanco, (in Latin,) Naples, March 10, 1842: Presenting his work on the Herculanean manuscripts.

From Captain James Vetch, of Birmingham, London, March 16, 1842.

From H. C. Williams, Pine Woods, Sevier County, Arkansas, May 3, 1842: Is collecting specimens, &c., for the Institute, proposes certain persons as members, and acknowledging letter, &c.

From Mr. Frederick Von Gerolt, Minister of Prussia in Mexico, May 3, 1842: Acknowledging letter of appointment, and sending a geognostic map, and four profiles, with a description; also, two pamphlets, one from Professor Del Rio, and one from Señor Herrera.

From Señor J. M. de Herrera, Mexico, May 3, 1842.

From Charles Cramer, Secretary (*pro tem.*) of the Imperial Mineralogical Society, St. Petersburg, May 25, 1842: Acknowledging letter to the Society, and accepting the correspondence of the National Institute. Will forward copy of its transactions, (in German.)

From the same—same date: Forwarding certain pamphlets, one of which is by himself, on the natural wonders of the United States, &c., &c.

From E. A. Vail, Paris, May 27, 1842: On the subject of the American Athenæum, lately formed at Paris, and asking the aid and co-operation of the National Institute, &c.

From George Catlin to Mr. Poinsett, London, June 2, 1842: Expressing a hope that the National Institute will purchase his Indian collections.

From Professor Fischer, Director of the Imperial Botanic Garden, St. Petersburg, June 12, 1841: Acknowledging letter and publications from the Institute, and forwarding a collection of cerealia, cultivated in the Imperial Botanic Garden; also, two annual reports respecting the same, and several pamphlets on scientific subjects.

From P. S. Duponceau, Philadelphia, June 13, 1842: Respecting the National Institute, &c.

From R. Dunglison, M. D., Secretary American Philosophical Society, Philadelphia, June 17, 1842: Acknowledging second, and asking a copy of first bulletin, for the Society.

From P. S. Duponceau, Philadelphia, June 17, 1842: Acknowledging letters, and offering remarks on the progress and interests of the National Institute.

From Hon. J. C. Spencer, Secretary of War, June 18, 1842.

From T. Abbott, Jr., Trenton, New Jersey, June 18, 1842: Recommending the establishment of depots in different cities of the United States for receiving contributions for the Institute, and offering to take charge of one for Trenton.

From Miss Agnes Mitchell, Brooklyn, Long Island, June 18, 1842: Offering her services to the National Institute.

From A. H. Palmer, New York, June 20, 1842: Offering to forward bulletins, &c., to the societies, &c., proposed by him.

From Dr. W. Harvey Kenney, Philadelphia, June 21, 1842: Referring to a former letter, and urging upon the attention of the Institute the importance of uniting science with religion, &c.

From H. J. Rogers, Baltimore, June 21, 1842: Asking copy of second bulletin, &c.

From Capt. R. M. Dunberry, New York, June 22, 1842.

From J. Coppinger, New York, June 22, 1842.

From J. K. Redfield, Corresponding Secretary of Lyceum of Natural History, New York, June 25, 1842: Transmitting the transactions of the Lyceum, &c.

From John Feast, Florist, Baltimore, June 25, 1842: Giving the results of his cultivation of some of the seeds, &c., sent home by the Exploring Expedition, and asking for others, on which he will also report. (Letter referred to the Curator.)

From James Hudson, Secretary British Legation, Washington, June 26, 1842: Presenting a living eagle, from Florida.

From J. L. L. F. Warren to Mr. Webster, Brighton, Massachusetts, June 27, 1842: Asking for seeds, plants, &c., of Exploring Expedition, with a view to cultivation, &c. (Letter referred to the Curator.)

From Baron Charles Dupin, Paris, June 29, 1842.

From P. S. Duponceau, Philadelphia, June 29, 1842: Acknowledging letters, and offering remarks on the affairs of the Institute.

From Capt. John C. Casey, U. S. Army, Washington, June 30, 1842: Presenting, in the name of Lieut. Henry Prince, objects of natural history, from Florida.

From J. D. Doty, Madison, Wisconsin Territory, July 2, 1842: Sending impressions on wax, of a coin found in the ruins of Aztalan. Hopes the Institute will be able to throw light on the subject, by comparing it with other coins. Enclosing printed description of Aztalan.

From Charles Baldwin, New York, July 6, 1842: Acknowledging receipt of bulletin No. 2; describing floral procession of children in Boston, July 4, hoping it may be imitated throughout the United States.

From Jacob R. Eckfeldt and Wm. E. Du Bois, U. S. Mint, Philadelphia, July 11, 1842: Presenting a recent work by them, on coins and precious metals.

From J. P. Screven, Savannah, July 15, 1842: Acknowledging letter, and presenting a collection of valuable fossils to the Institute.

From the same, July 28, 1842: Stating that he has forwarded three boxes containing his fossils, care of W. Habersham, Baltimore; describing the fossils, &c.

From George R. Morton, M. D., Sandusky, Ohio, July 15, 1842: Asking information respecting the Institute, to which he wishes to make contributions of coins, minerals, &c. Inquiring, also, how presents are to be forwarded, and the terms of membership, &c.

From A. H. Palmer, American and Foreign Agency, New York, July 15, 1842: Acknowledging receipt of two boxes of bulletins, &c., for foreign societies, to which he promises to forward.

From the same, July 27, 1842: Has sent off the various packages.

From Capt. Harrison H. Cocke, U. S. Navy, City Point, Virginia, July 17, 1842: Has sent to the Curator two boxes, one of eocene, the other of miocene fossils, &c.; also, specimen of the date-fish-rock, from Minorca.

From Charles A. Poulson, Jr., Philadelphia, July 18, 1842.

From C. H. Edwards to Mr. Webster, Va., July 18, 1842.

From Geronimo Valdes, Governor General of Cuba, July 19, 1842.

From Joshua Leavitt, Boston, July 20, 1842: Presenting a copy of his memorial on wheat, just published by the U. S. Senate.

From Benjamin Hale, D. D., President of Geneva College, July 28, 1842: Acknowledging membership, and offering fine specimens of minerals, &c.; sending copy of his baccalaureate address, &c., &c.

From Capt. Chas. W. Skinner, U. S. Navy, Staunton, Virginia, July 30, 1842.

From W. D. Porter, U. S. Navy, Washington, August 4, 1842: Referring to his former letter, suggesting the establishment of cabinets on board ships of war, and intimating that the Secretary of the Navy might appropriate the proceeds of the "slush fund" to the purposes of filling these cabinets.

From Thomas Sinclair, (engraver,) Philadelphia, Aug. 4, 1842.

The Corresponding Secretary laid before the members a letter from the President of the United States, dated on the 21st June, to Mr. Poinsett, President of the National Institute, tendering to the Institute the Portrait of M. Guizot, by Mr. Healey, and Mr. Poinsett's reply, dated 23d of the same.

He stated, that the Secretaries of War and Navy had acted upon the resolution passed by the Institute at the meeting in May last, requesting them to address circulars to the officers of their respective services, and he submitted to the meeting copies of their circulars. And, that a letter dated 5th of April, 1842, had been addressed to Col. Joachin Acosta, Chargé d'Affaires of New Grenada, near this Government, thanking him for a box containing rich specimens of gold, silver, and emerald, from the mines of New Grenada, and inviting him to be present at the meetng of the Institute.

Major J. D. Graham, of the Topographical Engineers, gave a verbal description of a parobolic reflector, used as a guide point in the survey of the Northeastern Boundary Line.

Dimensions of parabolic reflector, made for Major J. D. Graham, in June, 1841, by Henry N. Hooper & Co., of Boston:

Diameter of reflector, - - - - -	16.00	inches.
Distance from vertex to base, - - -	3.75	"
" of focus from vertex, - - - -	2.25	"
Diameter of large burner, - - - -	1.25	"
" small " - - - -	.50	"

Stated Meeting, September 12, 1842.

The Curator announced the following donations, &c.:

For the Cabinet.

Ibis Hagedasch, South Africa; Cryptena Sylvicola, Brazil; Colius Senegalensis, South Africa; Rhamphastos Aracari, Brazil; Garrulus, Brazil; Procyon lotor, (Racoon,) Pennsylvania; Skull of Arctomys Monax, Pennsylvania.—*From Samuel W. Woodhouse, Pennsylvania, through J. K. Townsend.*

Ardea exilis, from Potomac River.—*From Mr. Walker.*

Two specimens Thalassidroma Leachii, from Washington City.—*From John Varden.*

Thalassidroma Wilsonii, from Washington City,—*From Master Bender.*

Two specimens Thalassidroma Leachii, from Washington City.—*From Andrew Fueson.*

Hirundo rufa, from New Jersey.—*From J. K. Townsend.*

Vespertilio carolinensis, from Washington City.—*From Spencer F. Baird.*

Puffinus cinereus, from Potomac River.—*From J. Narden.*

Strix nyctea, from New Jersey.—*From Mrs. Col. Broom.*

Birds, Quadrupeds, Shells, &c., of which the following is a list.—*Collected for the Institute by J. K. Townsend.*

237	Specimens of Birds,	from Pennsylvania and Atlantic coast.
4	"	Quadrupeds from Pennsylvania.
25	"	Shells from Atlantic Coast, New Jersey.
129	"	Plants " " "
39	Species Birds' Eggs,	(numerous specimens,) from New Jersey.
48	Specimens of Birds' Crania and Sterna,	from New Jersey.

Also, a collection of Insects from New Jersey.

"	Crustacea	"
"	Fishes	"
"	Reptiles	"
&c.	&c.	&c.

Clearance of Brig Argil, of Baltimore, Captain Codman, at Canton, 1839.—*From General F. de la Roche.*

One Lizard, Salamandra, and one Tobacco Worm.—*From W. M. Maddox.*

Twelve pieces of Copper Coin.—*From Jeremiah Sullivan.*

Two Cannon Balls from Fort Cumberland, found, one ten, and the other eighteen feet below the surface of the ground.—*From H. G. Greaves.*

One Box, containing Copper Ores, &c.—*From Hon. Dr. Linn, U. S. Senate, Missouri.*

Fossils from Cumberland.—*From J. H. Causten, Jr., M. D.*

A Bayonet, found ten feet below the surface of the ground at Fort Cumberland, Alleghany County, Maryland, supposed to have belonged to the army of General Braddock.—*From Joseph Shriver.*

Plaster Cast of Mr. Norris, of Pennsylvania; Plaster Cast of Henry Clay, of Kentucky.—*From Mr. Pettrick.*

Petrifactions from the Canal near the Eastern Branch of the Potomac.—*From*

Tringa pectoralis, Magus cucullatus, three specimens Tetrao cupido, Rallus noveboracensis, Geomys, Lutra canadensis, from Arkansas. *From Lieut. Eustis, 1st Dragoons, through Col. J. J. Abert.*

Specimen of Zinc from Ore brought from the Franklin Furnace, New Jersey, smelted in Washington City, by W. L. Ames.—*From*

Box of Shells.—*From T. Wardell.*

Fossils from the neighborhood of Cumberland, Alleghany County, Maryland, and from the foot of Knobby Hill, Virginia.—*From Dr. Causten.*

Bullets, Slugs, &c., found at Fort Cumberland, in 1836.—*From W. G. Cranch.*

Box containing a musket fused in the fire of the Tower of London.—*From W. R. Palmer, Lieut. Top. Engineers.*

Skeletons of two Alligators.—*From Lieut. Col. Whiting.*

Three specimens Unio from the Washington Canal.—*From Edward Force.*

Copper Coin.—*From E. P. Baily.*

Copper Coins.—*From Henry Hardin.*

Shale, with Iron and Copper, from Richmond County, Ohio.—*From D. N. Phelps.*

Two Boxes Fossil Shells from the Chesepeake.—*From Capt. Harrison H. Cocke, U. S. A.*

Horned Lizard, (Agama,) from Texas.—*From J. E. Weems.*

One Copper Coin of 1822.—*From Joseph Boss.*

Five Copper Coins, and Paper of Mahogany Seed.—*From G. W. Harris.*

Two specimens Sulphuret of Iron, from deep cut on Baltimore Railroad.—*From C. D. McPherson.*

Aesculus parviflora, shrew Mole, (*Sorex,*) from Georgia.—*From Dr. Boyaken.*

Stone Axe, ploughed up in a field near the Little Falls of the Potomac; Brick from the Old Church at Jamestown, Virginia.—*From Capt. W. Easby.*

Four Pebbles from an Iceberg near the South Pole, collected by one of the crew of the Exploring Expedition.—*From*

Two Notes, of five cents each, Philadelphia.—*From W. S. Walker.*

One Mole, (*Scalops canadensis,*) from Georgia.—*From*

Fish from Frederick County, Maryland.—*From Rev. Dr. Morris.*

Serpent from the Mountains of Rio de Janeiro, Hippocampus and Centipede, from Rio de Janeiro.—*From George Washington Harrison, U. S. N.*

Petrified tooth, found in Florida, (*Equis?*) Polar Plant of the Westtern Prairies.—*From Lieut. B. Alvord, U. S. A.*

Iron Ore from Perry County, Pennsylvania.—*From Gilman Converse.*

Three Boxes containing Fossils, (bones of Megatherium, &c.)—*From Dr. Screven, of Savannah, Georgia.*

Eight specimens of Iron Ore from Clinton County, New York.—*From C. D. Barton.*

Black Bottle taken from the bottom of the River at Annapolis. Humming Bird's Nest and Egg.—*From D. Ridgely, for W. S. Green.*

Thirty Indian Arrow-heads, one Stone Axe, Stone Tomahawk, and Spear-head, found on the Eastern Branch of the Potomac.—*From Addison L. Davis.*

Fish's Palate.—*From Col. J. Kearney.*

Two Deers' Heads and Horns, interlocked, from Florida.—*From Lieut. A. S. Lee, U. S. Army.*

Copper Coins.—*From James D. Cox.*

Box of Fossil Shells, Eocene and Miocene, of Virginia.—*Presented to the Institute for Exchanges, by Edmund Ruffin, Petersburg, Virginia.*

MIOCENE.

1½ Ostrea virginiana, *Coggin's Point, Marl Beds and Lower Virginia generally.*
2½ " disparilis, *Gloucester County, Virginia.*
4 Cardita granulata, *Coggin's Point, and generally.*
6 (2 kinds) Astarte undulata, *Coggin's Point, and generally.*
9 Several species crepidula, *Coggin's Point and Yorktown.*
½ Carditamera arata, *Coggin's Point.*
1½ Pectunculus pulvinatus, *Dinwiddie, Williamsburg.*
2 " suboratus, *Prince George.*
1½ Venus Rileyii (?) *Coggin's Point.*
1½ " tridachnoides, *Coggin's Point.*
5 odd v. Arca, *Hanover, Surrey.*
2½ Arca incile, *Dinwiddie.*
2½ " centenaria, *Coggin's Point.*
½ broken, arca ? (large and rare,) *Ware River, in Gloucester.*
½ ½ Cytherea Sayana, *Yorktown.*
1½ Lucina anadonta, *Prince George.* In same box, sundry small and delicate shells, from Yorktown.
Lucina crepsarta, *Prince George.*
½ ½ ½ Lucina divaricata, *Prince George.*
½ Plicatula marginata, *Coggin's Point.*
½ ½ Petricola centenaria, *King William.*
1 Astrea, *Coggin's Point.*
2 Dentalium, *Coggin's Point.*
1½ Panopæa, *Dinwiddie.*
1½ Pecten Clintonius, *Coggin's Point.*
½ " septemnarius, *Coggin's Point.*
½ ½ " decemnarius, *Coggin's Point.*
1 " Jeffersonius, *Coggin's Point.*
½ " virginianus, *Coggin's Point.*
½ " eboreus, *Coggin's Point.*
2 ½ Chama corticosa, *Dinwiddie, York, Coggin's Point.*
4 " congregata, *Dinwiddie, York, Coggin's Point.*
3 Oliva, *Coggin's Point.*
1 Serpula, *Coggin's Point.*
1 Spatangus, (very rare,) *Prince George.*
6 (3 kinds) Fissurella, *Coggin's Point, Dinwiddie.*
1½ Artemis acetabulum, *Coggin's Point, Dinwiddie.*
8 (2 kinds) Turritella, *Coggin's Point, Dinwiddie.*
1 Fasciolaria mutabilis, *Dinwiddie.*
1½ Venus, (?) *Hanover.*

1 Natica, *Dinwiddie.*
2 Crassatella marylandica, *Dinwiddie.*
1 " undulata, *Coggin's Point.*
1 " melina.
1 Cardium.

EOCENE.

2 Ostrea sellæformis, *Coggin's Point and Hanover, and King William, on Pamunkey river.*
1 ½ ½ Ostrea ? (heavy, new ?) *Waterloo, on Pamunkey.*
½ ½ ½ " ? (thin, new ?) *Waterloo, on Pamunkey.*
2 " compressirostra, *Evergreen, on James river.*
½ ½ " ? (very heavy and rare,) *Evergreen found 20 feet* (Compressirostra, or new ?) *below height of river.*
½ ½ ½ " ? (young of preceding ?) *below height of river.*
½ ¼ Pecten ? *Coggin's Point.*
Sundry small Eocene Shells, from Pamunkey Green Sand Beds.

Specimens of Gold Ore, from Stafford County, Virginia; Petrifactions, from Washington County, Maryland; Rock Crystal, from the Natural Bridge, Virginia.—*From Wm. M. Mitchell.*

Lignite, from Washington City.—*From Wm. G. Cranch.*

Eighty-seven specimens of Birds, from Africa, Bengal, &c.—*From the Jardin des Plantes, Paris.*

Marble Rock and Cedar, from the Tomb of Lady Washington, near Fredericksburg, Virginia.—*From John Varden.*

Chinese Fan, one Silver Coin, and four small Bank Notes.—*From Margaret Julien.*

Madrepore Marble, (polished,) from the Lime Quarries, near Iowa City.—*From John Madison, St. Louis, Mo.*

Box, containing Patterns of English Iron Rails.—*From Capt. Geo. W. Hughes, Topographical Engineers.*

Columnar Basalt, from Giant's Causeway; Box made from fragment of the Wreck of a (74) Turkish Vessel blown up by the Greeks.—*From Dr. John Redman Coxe.*

Portrait (large) of John Evans, by Copeley.—*From his grandson, Estwick Evans.*

Musket partly fused in the fire of Tower of London.—*From Lieut. W. R. Palmer, Topographical Engineers.*

For the Library.

Seventeen Maps of German States.—Historich Chronologisch, Geographische, Tabellen, &c., Von P. Edmund Poch; Augsburg, 1736, 1 vol., folio.—Specimen of Printing Types and Ornaments cast in the letter foundry of Oliver Wells & Co., Cincinnati, 1829, pamphlet.—The History of the Works of the Learned, giving a general view of the state of learning throughout Europe; London, 1737, and 1739, 2 odd vols., 8vo.—Lea's Treatise on Leases and Annuities; London, 1738, 1 vol., 8vo.—Dictionaire Raisonné Universel d'Histoire Universelle par M. Valmont de Bomare; Paris, 1775, 9 vols., 8vo.—Travels through Germany, Bohemia, Hungary, Switzerland, Italy, and Lorrain, by John George Keys-

ler, F. R. S.; London, 1760, 4 vols., 8vo.—The Philadelphia Medical Museum, conducted by John Redman Coxe, M. D., 6 vols., 8vo.—Francoeur's Introduction to Linear Drawing, translated by Wm. B. Fowle; Boston, 1828, 1 vol., 10mo.—A Concise Natural History of East and West Florida, by Capt. Bernard Romans; New York, 1775, 1 vol., 8vo., (has lost some leaves.)—Journal Historique de la Revolution de la Partie de l'Est de Saint Dominique, par Gilbert Guillermin; Philadelphia, 1810, pamphlet, 8vo.—A Register of Weather for the last twenty-five years, by Jeremiah Alling, New Haven, 1810, pamphlet.—Campagne de Paris, in 1814, P. F. F. I. Gerand, pamphlet.—Le Peuple Instruit par ses Propres Vertus; Paris, 1787, 2 vols., 10 mo.—Histoire de la Conjuration de Maximilien Robespierre; Paris, 1795, pamphlet.—Memoires Secrets et Critiques des Cours, des Gouvernements et des Mœurs, des Principaux Etats de l'Italie, par Joseph Gorani; Paris, 1794, 3 vols., 10mo.—Experiments and Observations on Electricity, made at Philadelphia, in America, by Benjamin Franklin; London, 1749, 1 vol., 4to.—Clavis Diplomatica Danielis Eberhandi Baringii; Hanover, 1737, 1 vol., 4to.—Introduction to Solid Geometry, and to the Study of Cristallography, by N. J. Larken; London, 1820, 1 vol., 8vo.—A Manual of Lithography, translated from the French, by C. Hullmandel; London, 1821, 1 vol., 8vo.—Elementa Physica Conscripta in Usas Academicas, a Petro Van Musschenbrock, Lugduni Batavorum, 1741, 1 vol., 8vo.—Chrysal, or the Adventures of a Guinea; London, 1785, 4 vols., 10mo.—Tableau de Paris; Hamburg, 1781, 1 vol., 10mo.—A number of specimens of Continental Money.—Two imperfect copies of Dr. Coxe's tract on the Agaricus atramentarius.—*From Dr. John Redman Coxe, Philadelphia.*

Report made to the Beet Sugar Society of Pennsylvania, on the culture of Sugar Beet, and Beet Sugar manufactured in France.—Florula Columbiensis, or a List of Plants found in the District of Columbia, 1819.—Denfensa de D. Paulino Mackensie.—Exposicion de los Motivos que ha tenido el Presidente de Chili para desaprobar el Tratado de Paz.—Carey's Vindication of Small Farmers of Ireland.—Carey on the Study of the Learned Languages.—Carey on the Polish Struggles against Despotism.—Carey's Letters on Religious Persecution.—Carey's Prospectus of American Lyceum, Paris.—Carey de la Monarchie selon la Charte, par M. Le Viconte de Chateaubriand, 1816.—*From Dr. Causten, Washington.*

The Natural and Civil History of the French Dominions in North and South America, illustrated by Maps and Plans, &c.; part 1st, containing a description of Canada and Louisiana; part 2nd, containing St. Domingo aad St. Martin, St. Bartholomew, Gau-

daloupe, Martinique, &c., and Cayenne; London, 1741, folio; by T. Jeffreys, Geographer to his Majesty.—*From Leonard C. McPhail, Surgeon U. S. Army.*

Constitution of the Limestone County Literary and Scientific Society of Athens, Alabama.—*From the Society.*

Autograph Resolution for introduction into the Treaty with the Wabash and Illinois Tribes, containing a solemn guaranty by the United States of the Indian rights, by Hon. Roger Sherman.—*From his grandson, Charles Baldwin.*

An Old Book, (in Latin,) superbly illuminated.—*From Mrs. General Macomb.*

The Farmer's Register, vols. 7, 8, 9, 10, for 1839, 1840, 1841, 1842.—Supplement to the above, Essay on Calcareous Manures, &c., by Edmund Ruffin.—*From the Editor and Proprietor.*

Reports of the Joint Committee on Bank of Kentucky.—*From Hon. E. Jarvis.*

Instructions for using Mr. Fox's instrument for determining the Magnetic Inclination and Intensity, (published by the Admiralty;) London, 1842.—*From R. W. Fox.*

American Quarterly Register, vol. xv, No. 1, August, 1842; Boston, conducted by S. H. Riddell.—*From the Conductor.*

A Geological Report upon the Fourche Cove and its immediate vicinity, &c., &c., by W. Byrd Powell, M. D.; Little Rock, 1842.—*From Dr. Powell.*

Address on the Early Settlement of the Valley of Pequed, by R. Conningham, July 4, 1842.—*From the Author.*

Address to citizens of Knoxville, on February 10, 1842, the semicentennial Anniversary of the Settlement of the Town, by Thomas W. Humes.—*From the Author.*

Constitution and By-Laws of the Northern Academy of Arts and Sciences, and First Annual Report of the Curators; Hanover, 1842.—*From the Academy.*

Patronomatology, from an Essay on the Philosophy of Surnames, read before the Connecticut State Lyceum, November 13, 1842, by C. W. Bradley, M. A.—*From the Author.*

Appendix to the American in Egypt, by Geo. R. Gliddon.—*From the Author.*

Proceedings of the American Philosophical Society, vol. 2, No. 22, May, June, and July, 1842.—*From the Society.*

United States Literary Advertiser, New York, September, 1842.—*From the Publishers.*

Annales de l'Institut d'Afrique, June, 1842.—*From H. Wheaton, American Minister, Berlin.*

Pamphlet, Remarks on Recent Icebergs, by J. P. Couthouy.—*From the Author.*

Fifteen Almanacs, from 1805 to 1839.—*From J. J. Sayrs.*

Italian Architect, of 1835.—*From the Author.*

Address delivered before the American Whig and Cliosophic Societies of the College of New Jersey, September, 1840.—*From J. H. Causten, Jr.*

Report from the Department of Astronomy, &c.:

"Lieut. Gilliss stated to the Department that the bill authorizing the honorable Secretary of the Navy to erect an Observatory had become a law, and that he had been directed by the Department to consult the most eminent astronomers on the best plan for its construction.

He stated, also, that this, the first National Observatory, would be commenced under the most favorable circumstances. The site proposed is Camp Hill, and the buildings will probably be completed in January, 1844.

At a regular meeting of the Department held on the 9th September, instant, it was ordered, that the above information be communicated to the National Institute by the Secretary.

SILAS H. HILL, *Secretary.*"

Abstract of Correspondence.

Circular addressed to fifteen foreign societies in August, transmitting first and second bulletins, and asking their correspondence, &c., &c.

Letters and Communications.

From Professor H. C. Kutser, Technical Gymnasium of Erlangen, in Bavaria, March 13, 1842: On the subject of exchanging objects of natural history—furnishing a list of specimens for exchanges, and requesting orders from the Institute.

From Dr. T. G. Flügel, U. S. Consul, Leipsic, March 25, 1842: Stating that he has forwarded to Hon. Mr. Adams, for the Institute, a specimen of German industry, an allegorical napkin, manufactured by Mr. Schiffner, of Saxony, and expressing a hope that the Institute will take some step to recommend the fabric to the American public.—American autographs.

From Dr. Robley Dunglison, Secretary of American Philosophical Society, Philadelphia, July 15, 1842.

From Hon. E. Everett, American Minister, London, July 29, 1842.

From Edmund Ruffin, (to Mr. Upshur,) Petersburg, Va., July 29, 1842: Proposing to send or bring on a suite of Virginia tertiary fossils to exchange for duplicates of the Exploring Expedition.

From Capt. George W. Hughes, Topographical Engineers, West River, August 7, 1842.

From Dr. T. Purrington, Washington, August 8, 1842: Presenting in the name of Midshipman Geo. W. Harrison, U. S. Navy, various articles of natural history.

From Lieut. Benj. Alvord, U. S. Army, August 9, 1842: Describing the polar plant of the western prairies, with a sketch of it, a dried specimen of which he has presented to the Institute.

From Thomas G. Clemson, Lumpkin County, Georgia, August 9,

1842: Enclosing a note from M. Vasquez, containing lists of Spanish minerals for exchanges.

From H. K. Randall, Washington, August 11, 1842.

From Dr. J. R. Coxe, Philadelphia, August 11, 1842: Announcing that he was about to forward four boxes of contributions to the National Institute, of which a list is given, &c.

From the same, August 12, 1842: Enclosing bill of transportation of the above boxes, &c.

From Jacob Snyder, Jr., Philadelphia, August 12, 1842.

From Col. Henry Whiting, U. S. Army, Detroit, August 12, 1842.

From W. Habersham, Baltimore, August 13, 1842: Enclosing railroad receipt for three boxes of fossils, from Dr. Screven, of Savannah, and a bill of expenses.

From Estwick Evans, Washington, August 15, 1842: Offering a large portrait, by Copeley, of his father, John Evans, a distinguished merchant during the American Revolution, and linguist for the then Colonies with the French fleet.

From B. S. Roberts, Civil Engineer, Plattsburg, New York, August 15, 1842: Being about to proceed to Russia upon professional employment, he wishes to maintain his correspondence with the National Institute, to which he offers his services.

From J. H. Causten, Jr., Washington, August 16, 1842.

From J. E. Muse, Cambridge, Mass., August 19, 1842.

From Dr. E. Foreman, Baltimore, August 20, 1842: Enclosing a paper describing the fossil bones of the megatherium presented by Dr. Screven, of Savannah.

From L. C. McPhail, Surgeon U. S. Army, August 20, 1842: Presenting a valuable historical work on America, &c.

From W. H. Smyth, Chelsea, England, August 20, 1842: Acknowledging bulletin No. 2, and forwarding his privately printed catalogue of Roman brass medals; also, specimens of impressions of the head of Hipparchus, from the Poniatowski-gem, intended as a vignette illustration of his work.

From J. Addison, (to Mr. Gales,) St. Louis, Mo., August 25, 1842.

From Lieut. W. R. Palmer, Topographical Engineers, Philadelphia, August 26, 1842.

From W. Rich, Washington, August 26, 1842.

From Hon. G. S. Houston, House of Representatives, August 26, 1842: Enclosing manuscript copy of constitution of the Limestone County Literary and Scientific Society of Athens, Alabama.

From J. P. Espy, Washington, August 27, 1842: Enclosing a paper containing remarks intended to be made before the National Institute "on the dew-point, and some of its uses."

From E. Ruffin, Petersburg, Virginia, August 30, 1842: Has sent to the Institute a box of eocene and miocene fossils of Virginia

(of which a list is enclosed, vide pages 252, 253,) and wishing exchanges in recent shells, &c.

From J. Coppinger, New York, August 31, 1842: Enclosing bill of transportation and expenses for boxes from Havre, viz: $13.

From Rev. Peter S. Chauncey, Rye, New York, September 10, 1842.

From C. Baldwin, New York, September 6, 1842: Presenting an autograph resolution for introduction into the treaty with the Wabash and Illinois tribes, by his grandfather, Roger Sherman, containing a solemn guaranty by the United States of the Indian rights, &c., &c., &c.

From Estwick Evans, Washington, September 9, 1842: Respecting the portrait of his father.

From Col. Joseph G. Totten, Chief Corps of Engineers, September 10, 1842: Offering a complete catalogue of the cabinet of minerals presented by him to the Institute.

From John B. Murray, (to Mr. Poinsett,) New York, August 22, 1842: Offering the press of Dr. Franklin to the Institute.

On motion of Mr. Markoe, it was

Resolved, That the thanks of the National Institute be given to Col. Totten, for the valuable cabinet of minerals and the descriptive catalogue of its contents presented by him to the Institute.

A letter from the Commissioner of Patents, transmitting a request of N. W. Hatch, of Vicksburg, Miss., to be furnished with seeds and plants of the Exploring Expedition, was read and referred to the Curator.

A paper on the dew-point, by Professor Espy, was read, and on motion referred to the Department of Chemistry.

On motion of Mr. Poinsett, it was unanimously

Resolved, That a committee be appointed to wait upon the Secretary of the Navy, and upon the joint committee of the Library of Congress, and to proffer to them the co-operation of the Institute in carrying into effect the intentions of the law lately passed by Congress, for the arrangement and preservation of the collections made by the Exploring Squadron, and for the publication of the results of that Expedition; and that this committee be authorized to act in the name and behalf of the Institute in all matters relating to this subject.

Stated Meeting, October 10, 1842.

Mr. Townsend announced the following donations:

For the Cabinet.

Ardea exilis, Rallus virginianus, Rallus carolinus, from the Potomac river.—*From Charles Lee Jones, Washington.*

Herodias virescens, from Potomac River.—*From E. W. Hansell.*

Accipiter fuscus, from Washington.—*From Henry O. Birch.*
Anas americana, from Potomac river.—*From Col. P. Force.*
Brachyotus palustris, from District of Columbia.—*From Edward Barry.*
Picus varius, from District of Columbia.—*From A. McWilliams, Jr.*
Falco fuscus, from Washington.—*From*

List of specimens collected for the National Institute, by *John K. Townsend:*

BIRDS.

1	Buteo borealis,	*Pennsylvania.*
1	Corvus americanus,	"
2	Turdus rufus,	"
2	" felivox,	"
2	" aurocapillus,	"
1	" minor,	"
9	" migratorius,	"
1	Septophaga ruticilla,	*Cape May, N. J.*
12	Agelaius phœniceus,	"
5	" pecoris,	"
2	Pyranga rubra,	"
2	" æstiva,	"
1	Vireo gilvus,	"
2	" olivaceus,	"
5	Sialia Wilsonii,	"
3	Certhia familiaris,	"
2	Fringilla erythropththalma,	"
2	" cyanea,	"
1	" purpurea,	"
2	" iliaca,	"
2	" canadensis,	"
3	" socialis,	"
3	" hyemalis,	"
4	" melodia,	"
3	" savanna,	"
6	" tristis,	"
1	" americana,	"
2	" graminea,	"
2	" palustris,	"
3	" maritima,	"
2	" caudacuta,	"
5	Sitta carolinensis,	"
1	Anthus spinoletta,	"
1	Alauda cornuta,	"
1	Hirundo riparia,	"
2	" bicolor,	"
1	Picus varius,	"
2	" villosus,	"
3	" erythrocephalus,	"
2	" pubescens,	"
3	Regulus cristatus,	"
1	" calendula,	"
3	Tyrannula fusca,	"
2	Tyrannus intrepidus,	"
4	" crinitus,	"
2	Troglodytes hyemalis,	*Pennsylvania.*
1	" ædon,	"
5	Parus bicolor,	"
1	" carolinensis,	"
1	Numenius borealis,	*Cape May, N. J.*
2	Squatarola helvetica,	"
2	Strepsilas interpres,	"
3	Sylvicola parus,	"
4	" castanea,	"
3	" æstiva,	"
4	" americana,	"
1	" maculosa,	"
2	" virens,	"
1	" pardalina,	"
1	" trichas,	"
1	" coronata,	"
1	" canadensis,	"
5	Quiscalus versicolor,	"
1	Sturnella ludoviciana,	"
1	Icteria viridis,	"
2	Columba carolinensis,	"
3	Mniotilta varia,	"
2	Bombycilla carolinensis,	"
4	Colaptes auratus,	"
7	Icterus baltimore,	"
1	Coccothraustes cærulea,	"
2	Caprimulgus virginianus,	"
1	Coccyzus americanus,	"
3	Ardea virescens,	"
2	" candidissima,	"
1	" cærulea,	"
3	Charadrius vociferus,	"
2	Rallus carolinus,	"
2	" crepitans,	"
2	Totanus macularis,	"
4	" semipalmatus,	"
1	" melanoleucus,	"
13	Scolopax Wilsonii,	"
6	" grisea,	"
3	Tringa alpina,	"
2	" pusilla,	"
5	" islandica,	"
4	Sterna hirundo,	"

In all, 237 specimens of birds.

QUADRUPEDS.

3 Arctomys monax, *Pennsylvania.* 1 Sciurus hudsonicus, *Pennsylvania.*

Also, collections of plants, birds' eggs, birds' skulls and sterna, insects, shells, fishes, crustacea, &c., &c.

Catalogue of Bird Skins, from le Jardin des Plantes, Paris, announced on page 254.

No. 1. Vultur indicus, *Pondicherry*.
2. Falco punctatus, *Madacascar*.
3. " clagrus, *Bengal*.
4. Strix, *Senegal*.
5. Strix capensis, *Cape of G. Hope*.
6. Lanius collaris, "
7. " barbarus, *Senegal*.
8. " *Africa*.
9. " auritus, *Bengal*.
10. Ocyterus cinereus, *Bengal*.
11. " bicolor, *Madagascar*.
12. Turdus mindinensis, *Bengal*.
13. Muscicapa flabellifera, *N. Guinea*.
14. " barbonica, *Bengal*.
15. " aurantia, *Bengal*.
16. Edolius macrocerus, *Bengal*.
17. Lamprotornis metallicus, *Bengal*.
18. Turdus æneus, *Senegal*.
19. " auratus, *Senegal*.
20. " cafer, *Bengal*.
21. " macrourus, *Bengal*.
22. " solitarius, *Bengal*.
23. Gracula tristis, *Bengal*.
24. " pogodarum, *Bengal*.
25. " malabarica, *Bengal*.
26. Pastor roseus, *Malabar*.
27. Sturnus, *Madagascar*.
28. Turdus cinclus, *Persia*.
29. " cochinchinensis, *Java*.
30. Melliphaga Dumerilii, *N. Zealand*.
31. " auricomis, *Tonga-tabu*.
32. " maculata, *N. Holland*.
33. Gracula religiosa, *Bengal*.
34. Oriolus chinensis, *Bengal*.
35. " melanocephalus, *Calcutta*.
36. Iora scapularis, *Java*.
37. Motacilla pectoralis, *Cape of Good Hope*.
38. Anthus, *Bengal*.
39. Eurylaimus nasutus, *Sumatra*.
40. Vidua, *Abyssinia*.
41. Fringilla, *Bengal*.
42. Loxia capensis, *C. of G. Hope*.
43. " ignicolor, *Senegal*.
44. Buphaga erythrocephala, *Abyssinia*.
No. 45. Sturnus unicolor, *Europe*.
46. Coracias abyssinica, *Bengal*.
47. " bengalensis, *Bengal*.
48. Pica rufiventris, *Bengal*.
49. Coracias orientalis, *Java*.
50. Nectarinia inornata, *Java*.
51. Upupa epops, *Africa*.
52. Promerops capensis, *Africa*.
53. Merops viridis, *Bengal*.
54. " ægyptius, *Manilla*.
55. " minutus, *Senegal*.
56. Alcedo rudis, *Abyssinia*.
57. " smyrnensis, *Bengal*.
58. " azureus, *Senegal*.
59. " cristatus, *Madagascar*.
60. Dacelo atricapilla, *Calcutta*.
61. " chlorocephala, *Calcutta*.
62. Buceros malabaricus, *Bengal*.
63. Cuculus orientalis, *Bengal*.
64. " auratus, *Senegal*.
65. " " *Bengal*.
66. Centropus nigrorufus, *Senegal*.
67. Bucco violotti, *Senegal*.
68. " philippensis, *Calcutta*.
69. Psittacus, *New Guinea*.
70. Numida, *Africa*.
71. Pterocles setarius, *Africa*.
72. Hemipodius pugnax, *Bengal*.
73. Columba ænea, *Bengal*.
74. " javanica, *Java*.
75. " australis, *Madagascar*.
76. Charadrius spinosus, *Africa*.
77. Cursorius isabellinus, *Africa*.
78. Charadrius melanocephalus, *Senegal*.
79. Ciconia pondiceriana, *Bengal*.
80. Ibis religiosa, *Senegal*.
81. Gallinula chloropus, *Madagascar*.
82. Porphyrio, *Bengal*.
83. Fulica cristata, *Africa*.
84. Sterna fuliginosa, *Bengal*.
85. Diomedea chlororhynchos, *Indian Sea*.
86. Carbo africanus, *Senegal*.
87. Anas carunculata, *Bengal*.

Head-dress worn by Atahualpa, the last of the Incas, brought from the Temple of the Sun, and presented to the National Institute by Seth Sweetser, U. S. Consul at Guayaquil, (composed of the femurs and teeth of monkeys, &c.)

Dr. Sewall exhibited and explained two transparent drawings, illustrating the circulation of the blood, the process of digestion, &c.

On motion of Dr. John M. Thomas, it was

Resolved, That an additional department, to be called the Department of Medicine, be organized.

Stated Meeting, November 14, 1842.

The Corresponding Secretary announced the following contributions and deposites:

For the Cabinet.

Iron Sand Conglomerate, from the alluvial banks of the Connecticut River.—*From Dr. Samuel Webber.*

Box, containing Fresh-Water Bivalves of the River of Plate.—*From George Brown, Beverley, Mass.*

Box of Minerals, &c., illustrating the Onondaga Saliferous Group.—*From O. Root, Syracuse, New York.*

Indian Tomahawk of Stone, from North Carolina; 3,289 Dollars Continental Money, (including counterfeits.)—*From H. H. Sylvester.*

Collection of Fossils, from Blossburg, Pennsylvania.—*From Dr. Lewis Saynisch.*

Bust (a cast) of the late John Vaughan, of Philadelphia.—*From James H. Causten, for Jacob Snyder, Jr.*

Portrait of Sultan Mahmond I.—*From Mrs. Commodore Rogers.*

Twenty-two Ancient Roman Coins.—*From W. B. Hodgson.*

Wood bored by Shells; Coral, piece of the rock of which the Castle of St. Juan de Ulloa is constructed.—*From Lieut. John Rogers, U. S. N.*

Corythus enucleator, from New York; Columba; Ardea, from South America; Caprimulgus europeus? from Europe; Columba migratoria, from Virginia.—*From W. M. and S. F. Baird, Carlisle, Pennsylvania.*

Accipter fuscus, Buteo pennsylvanica, from Washington.—*From Thomas Tonge.*

Phalacrocorax graculus, from Potomac River.—*From B. O. Shekell.*

Picus varius, from Carlisle, Pennsylvania.—*From W. M. and S. F. Baird.*

Strix pratincola, (young,) from Washington.—*From Dr. A. McWilliams.*

Two specimens Fuligula glacialis, from Potomac River.—*From Col. P. Force.*

Picus pubescens, from Washington.—*From Thomas Tonge.*

Ulula nebulosa, from Washington.—*From John L. Ward.*

Otus americanus, from Washington.—*From Gideon Brook.*

Turdus migratorius, (albino variety,) from Maryland.—*From W. D. Addison.*

Castania nut, from Brazil.—*From James W. McCulloch.*

Box, made from the fragments of a Turkish 74 Gun Ship, blown up by the Greeks, on the 19th June, 1822; one hundred and forty-

two pieces of Continental Paper Money.—*From John Redman Coxe, M. D.*

Full length likeness of the Rev. Thomas H. Stockton, of the Methodist Protestant Church.—*From James A. Kennedy.*

Tarantula, from Texas.—*From Dr. J. R. Piper.*

Singular formation of Iron Ore, found in the Patapsco River, near Baltimore.—*From Francis A. Piper.*

Cannon Ball, from Fort Cumberland.—*Deposited by Wm. G. Cranch.*

Singular Crab, taken from the Stomach of a Fish caught in the Gulf of Mexico.—*From H. Hale, of the Exploring Expedition.*

Crystal, from South America; two specimens of Oxide of Iron, from Bladensburg, Md.; one do.; Hour-glass Sand; specimen of Petrified Wood.—*Deposited by Wm. G. Cranch.*

Stone Axe, from Anne Arundel County, Md.—*From Mr. Elliott.*

Skin of a large Fox Squirrel, (*Sciurus capistratus;*) piece of an Indian Coffin, from the Big Mound near St. Louis, Missouri; Cotton Seed, from the South.—*From Joseph Etter.*

Chinese Umbrella.—*From Capt. Titcomb.*

Shoe, with Oysters attached.—*From Wm. Walker.*

Nautilus sawn in two, showing the interior.—*From Jovella Guadigni, of Florence.*

Eight Copper Coins, collected on the Exploring Expedition.—*From David Smith.*

Specimens of Lignite and Sulphuret of Iron, from the deep cut on the Baltimore railroad.—*From J. G. Bruff.*

Cotton and Seed from Guayaquil.—Living Plants, viz: Punica granata, Lantand Sellowii, Viburnum tinas, Plumbago capensis, Zieria Smithii, Jasminum azuricum, Yucca gloriosa, Pittosporum Tobira, Cycus revoluta, Hypericum calmianum, two Lemon trees.—*From J. H. Causten, Jr., M. D.*

Forty-two specimens of Bird Skins, as in the following list.—*From Geo. C. Leib, M. D., of Philadelphia:*

1 Strix funerea,	*New Caledonia.*	2 Muscicapa pusilla,	*Pennsylvania.*
1 Ardea nycticorax,	*Michigan.*	1 " ruticilla,	"
1 Picus tridactylus,	*New Caledonia.*	3 Sylvicola pardalina,	"
1 Tetrao lagopus,	"	1 " vermivora,	"
1 Picus carolinus,	*Pennsylvania.*	1 " maritima,	"
1 " villosus,	"	1 " canadensis,	"
1 Numenius borealis,	*Michigan.*	1 " castanea,	"
1 Charadius pluvialis,	"	1 " icterocephala,	"
2 Sterna nigra,	"	1 " striata,	"
1 Tringa Shinzii,	"	1 " virens,	"
1 Rallus noveboraconsis,	"	1 " maculosa,	"
2 Loxia curvirostra,	"	1 " solitaria,	"
1 Tringa semipalmata,	"	1 " chrysoptera,	"
1 Troglodytes brevirostris,	"	1 " rubricapilla,	"
1 Turdus minor,	*Pennsylvania.*	3 " azurea,	*Michigan.*
1 Fringilla purpurea,	"	2 " Blackburniæ,	"
1 Vireo solitarius,	"	1 Trochilus rufus,	*Oregon.*

For the Library.

Esame e Proposta di cio che Manca per la Compilazione di un Trattado di Acustica, Compiuto ed Applicabile alle Arti, di Paolo Anania de Luca Napoli, 1841.—*From the Chev. Martuscelli, Consul General of the Two Sicilies, New York.*

An Introduction to English Grammar, on an Analytical Plan, by Samuel Webber, Boston, 1832.—*From the Author.*

Col. Edmund Scarburg's Expedition from Virginia to Annamessecks and Manokin, pursuant to an act of the Grand Assembly of Virginia, in 1663, (printed by order of the Legislature of Maryland, 1833.)—*From L. D. Teackle.*

The Past and Present Statistical State of Ireland; London, 1827, folio, by Cesar Moreau, F. R. S.—British and Irish Produce and Manufactures exported, from year to year, from Great Britain, by the same.—*From E. A. Vail.*

Catalogue des Vegetaux et Disponibles dans l'Etablissement d'Augustin et Baumann à Bolleviller et Mulhouse; Haut Rhin, 1842–1843.—*From Robert Walsh.*

Nouveaux Memoires de l'Academie Royale des Sciences et Belles Lettres de Bruxelles, tom. xv, 1842, quarto.—Bulletin de l'Academie Royale des Sciences, &c., tom. ix, Nos. 3, 4, 5, 6, 1842, octavo.—Instructions pour l'Observation de Phénomènes Périodique de l'Homme, par M. Schwann.—*From the Academy, by M. Quetelet, perpetual Secretary.*

A Note on the Winds, as influencing the tracks sailed by Bermuda Vessels, and on the advantage which may be derived from sailing on Curved Courses, when meeting with Revolving Winds, by his Excellency W. Reid, Governor of Bermuda, May 11, 1842.—Royal Gazette, September 20, and October 11 and 18, containing Meteorological Report kept at the centre signal station at Bermuda.—*From Governor Reid.*

Drawings of some of the Megatherium Bones of Georgia, presented by Dr. J. P. Screven, of Savannah.—*From Dr. Screven.*

Memoires de l'Academie Imperiale des Sciences de St. Petersburg, from 1830, first vol., first livraison, to the 5th and 6th livraisons of second vol., 1842, inclusive, quarto.—*From the Academy, by the hands of M. de Bodisco, Minister of Russia in the United States.*

Soluzione di un Problema Importantissimo in Geologia, ed Esame del Flusso e Riflusso del Mare, di Leonardo Porta, Naples, 1839.—*From the Author.*

Reise in das innere Nord-America von Maximilian Prinz zu Wied, Prospectus.—*From Dr. Lewis Saynisch.*

Bailey's Dictionary.—*From H. H. Sylvester.*

Observations Meteorologiques et Magnetiques faites dans l'Entendue de l'Empire de Russie, redigées et publiées par A. T. Kupffer, 2 vols., quarto, St. Petersbug, 1837.—Annuaire Magnetique et Me-

teorologique du Corps des Ingenieurs des Mines de Russie, ou Recueil d'Observations publiées par Ordre de S. M. l'Empereur Nicolas, I, et sous les Auspices de M. le Compte Cancrine, Ministre des Finances, par A. T. Kupffer, 3 vols., quarto, 1839, 1840, 1841.—Annuaire du Journal des Mines de Russie, St. Petersburg, (5 vols., octavo,) 1835, 1836, 1837, 1838.—*From C. Tcheffkine, Major General of Russian Mining Engineers.*

Travaux de la Commission pour fixer les Mesures et les Poids de l'Empire de Russie, redigés par A. T. Kupffer; St. Petersburg, 1841, 2 vols., quarto, with a folio volume of plates.—*From Col. Todd, American Minister at St. Petersburg, in the name of Count Cancrine, Minister of Finance.*

Descriptive Catalogue of a Cabinet of Roman Imperial large Brass Medals, by Capt. W. H. Smyth, R. N., &c.; Bedford, 1834, quarto.—Report of the Astronomer Royal to the Board of Visitors, Royal Observatory, Greenwich, June 4, 1842, by G. B. Airy.—*From Capt. W. H. Smyth, R. N.*

First Report of the Committee of the Newfoundland Agricultural Society, St. John's, April 13, 1842.—Rules and Regulations of the Society.—*From the Society, by Joseph Templeman, Secretary.*

Summary notice concerning Bible Societies in France and elsewhere, translated by Jacob Porter, 1825.—Several Pamphlets, &c.—*From Mr. Porter.*

Annales de l'Institut d'Afrique, Nos. 7 and 8.—*From H. Wheaton, American Minister, Berlin.*

On Whirlwind Storms, &c., &c., &c., by W. C. Redfield, 1842.—Reply to Dr. Hare's Objections Relating to Whirlwind, &c., &c., by the same.—*From the Author.*

Proceedings of the Academy of Natural Sciences of Philadelphia, vol. 1., Nos. 15, 16, 17, 18, and 19, June, July, August, September, and October, 1842.—*From the Academy.*

Proceedings of the American Philosophical Society, vol. 2, No. 23, August, September, and October, 1842.—*From the Society.*

Home Book Circular, New York, vol. 1., No. 3, September, 1842.—*From the Publishers.*

United States Literary Advertiser, New York, No. 16.—*From the Publishers.*

Monography of North American Cuscutinea, by George Engelmann, M. D., of St. Louis.—*From the Author.*

Notes of a Botanical Excursion to the Mountains of North Carolina, &c., &c., by Asa Gray, M. D.—Several Pamphlets.—*From Asa Gray, M. D.*

Lecture on the Life of Dr. Franklin, by the Rev. Hugh M. Neal, A. M.—*From Hon. J. R. Poinsett.*

History of Louisiana, being an abstract of documents in the offices of the Department of State and of the Treasury.—*From Dr. J. H. Causten, Jr.*

Letters and Communications.

From Leonardo Porta, (to Mr. Poinsett,) Naples, February 27, 1842: Transmitting a work, of which he is the author, to the Institute, which he hopes will approve his labors.

From Dr. Samuel Webber, Charlestown, N. H., August 9, 1842: Submitting a manuscript containing observations on instinct, and a grammar, by himself, on which he asks the opinion of a committee of the Institute; and presenting a specimen of iron sand.

From Marques de Paranagua, Rio de Janeiro, August 9, 1842.

From Joseph Templeman, Secretary of Agricultural Society of Newfoundland, St. John's, August 10, 1842.

From the Royal Scottish Society of Arts, by James Tod, Secretary, Edinburg, September 10, 1842: Acknowledging receipt of constitution, and first and second bulletins, with thanks, and stating that the Society will be happy to correspond with the National Institute, &c.

From L. D. Teackle, Washington, August 14, 1842: Presenting an ancient record containing account of an expedition of Col. Edmund Scarbury, printed by order of the House of Delegates of Maryland.

From Robert Walsh, Paris, August 17, 1842: Transmitting a communication from M. Guyetant, offering a fine herbal, of which a description is given, for sale to the Institute.

From his Excellency Don Andres Garcia Cambay, Minister Marine and Commerce, and ex-Governor and Captain General Philippines, Madrid, August 18, 1842: Offering his services to the Institute, &c., &c.

From his Excellency Don Fran. Henriques, ex-Intendent General of the Philippines, and ex-President of the Real Sociedad Economica, Madrid, August 20, 1842.

From Je. Silvestre Rebello, Rio de Janeiro, August 22, 1842: Expressing pleasure at his election as a member of the Institute, and a disposition to do all he can for it, &c., &c.

From W. W. Andrews, U. S. Consul, Malta, August 26, 1842: Enclosing letter to him from M. Rochet d'Hericourt, author of Travels in Abyssinia, dated Kosseir, in Egypt, March 1, 1842, containing various manuscript scientific observations in Eastern countries.

From Eugene A. Vail, Paris, August, 1842: Transmitting statistical and tabular statements respecting Ireland, by M. Cesar Moreau, &c., &c.

From M. Quetelet, Astronomer Royal and Secretary of Academy of Sciences, (to Mr. Poinsett,) Brussells, September 6, 1842: Transmitting several documents, and asking the co-operation of the Institute in observing certain periodical phenomena respecting man, &c.

From W. W. Andrews, U. S. Consul, Malt , September 8, 1842: Referring to his former letter respecting M. R. d'Hericourt, &c.

From Sir Charles R. Vaughan, London, September 14, 1842: Expressing a desire to contribute to the objects of the Institute, &c.

From Miss Agnes Mitchell, Brooklyn, N. Y., September 15, 1842: Making inquiry as to the employment of artists to delineate illustrations for the publication of the Exploring Expedition voyage.

From Governor Wm. Reid, Bermuda, September 19, 1842: Accepting membership, and expressing a desire to aid its objects. Has ordered copy of a newspaper containing weekly meteorological observations to be regularly sent to the Institute for its use, and for the use of Mr. Espy. Has also ordered a copy of his work on storms to be sent to the Institute.

From the same, September 20, 1842: Transmitting several copies of his sailing directions for Bermuda vessels when meeting with revolving winds.

From A. H. Palmer, New York, September 24, 1842.

From Sir John Harvey, Governor of Newfoundland, St. John's, September 26, 1842.

From Geoffroy S. Hallaire fils, Administrator of the Museum of Natural History, Paris, September 26, 1842: Proposing exchanges and correspondence on the part of the Museum of Natural History of Paris, and sending, by way of invitation, a box of birds and manuscripts.

From Lieut. J. L. Donaldson, U. S. Army, Houlton, Maine, September 29, 1842: Offering to the Institute the head and horns of a five year old bull moose.

From Dr. Lewis Saynisch, Blossburg, Pennsylvania, October 6, 1842: Forwarding duplicate of a letter from him in 1840, &c., &c.

From Dr. J. P. Screven, Savannah, October 7, 1842: Communicating additional remarks respecting the fossil bones of the megatherium of the United States, presented by him to the Institute, intended for use if further notice be taken of them in the next bulletin.

From the same, September 25, 1842: Forwarding four drawings of the maxillary bones of the megatherium.

From Fletcher Webster, Acting Secretary of State, Washington, October 8, 1842: Enclosing a communication of the Imperial Academy of Sciences, of St. Petersburg, and translation of a note from M. de Bodisco, Russian Minister, with a present of valuable scientific works, &c.

From James M. Allen, Albany, October 8, 1842: Stating that he has been making efforts to procure for the Institute a suite of duplicates of the geological collections of New York State.

From Sir W. S. H. Barnaby, Bermuda, October 11, 1842.

From John Carroll Brent, Washington, October 12, 1842.

From George Brown, Beverley, Mass., October 12, 1842: Presenting a collection of shells.

From Rev. James Ryder, President of Georgetown College, October 15, 1842.

From General W. J. Worth, (to Col. Abert,) New York, October 16, 1842: Forwarding a cabinet of arranged shells, and marine objects.

From W. J. Stone, Treasurer, October 17, 1842.

From George Folsom, New York, October 22, 1842.

From O. de A. Santangelo, New York, October 17, 1842: Transmitting a work on acoustics, by Paolo A. de Luca, published at Naples, in 1841, which the Chevalier Martuscelli, Consul General of the Two Sicilies, desired him to present to the Institute, and requesting that the author may be enrolled among the corresponding members.

From O. Root, Syracuse, New York, October 21, 1842: Forwarding a box of minerals and rocks, illustrating the Onondaga saliferous group, and proposing to send fossils and other specimens, for which he asks a return in minerals.

From Henry Wheatland, Salem, Massachussetts, October 25, 1842.

From Dr. Lewis Saynisch, Blossburg, October 25, 1842: Proposing certain societies and individuals as correspondents, and sending prospectus of a work on North America, by Prince Maximilian de Wied, whom he proposes as a member.

From Leonard C. McPhail, Surgeon U. S. Army, Plattsburg, New York, October 25, 1842: Promising to make contributions, &c.

From W. D. Brackenridge, Washington, October 26, 1842.

From H. H. Sylvester, Washington, October 28, 1842: Presenting books, &c.

From James Camack, Athens, Georgia, October 28, 1842: Suggesting that the Institute should take steps to promote the introduction and cultivation in the Southern States of the olive.

From James H. Causten, Washington, November 3, 1842: Presenting, in the name of Jacob Snyder, Jr., a bust of the late John Vaughan, of Philadelphia.

From C. S. Todd, E. E. & M. P. U. S., St. Petersburg, communicating two letters addressed to him; one from General Tcheffkine, St. Petersburg, $\frac{7}{5}$th March, 1842, communicating a series of the published works of the Imperial Administration of the Russian Mines, for the Institute: the other from Count Cancrine, March 31, (April 12,) 1842: presenting to Col. Todd two copies of Mr. Kupffer's work on Russian weights and measures, one of which Mr. Todd has presented to the Institute.

From C. Tcheffkine, Major General Russian Mining Engineers, St. Petersburg, $\frac{6}{18}$th March, 1842: Presenting the works published by the Imperial Administration of the Russian Mines, &c.

From Franklin Litchfield, U. S. Consul, Puerto Cabello, October 3, 1842: Acknowledging letters and bulletins: asks that Colonel

Codazzi may be made a corresponding member, and forwards a box of copper ores and other minerals from Oroa.

From Henry Wheaton, E. E. & M. P. of United States, Berlin, 1842: On modern art and artists of Germany.

From P. S. Duponceau, Philadelphia, November 8, 1842: Reflections on the meeting of scientific men of the United States, proposed by the Institute's committee, Mr. Spencer, Secretary of War, chairman, &c.

From R. M. Harrison, U. S. Consul, Kingston, Jamaica, October 10, 1842: Death of Dr. Bancroft, whose valuable library will be for sale; proposes its purchase to the Institute.

From His Excellency Aureliano de Souza e Oliveiro Coutinho, Minister Foreign Affairs, Rio de Janeiro, August 8, 1842: Acknowledging letter of 17th May, and accepting membership, &c.

From Don Ignace Domeyko, Coquimbo, July 22, 1842: Will send to the Institute specimens of the minerals, &c., of the Andes of Chili, &c., &c.

From Lieut. John T. McLaughlin, U. S. N., Washington, November 11, 1842.

From the Royal Geographical Society, London, by J. R. Jackson, Secretary, September 7, 1842: Acknowledging first and second bulletins, with thanks, &c.

From Colonel Symington, U. S. Army, Washington, November, 1842: Stating that Ordnance Sergeant McArthur has forwarded to him a package of fossils from the Chesterfield Coal Mines, Virginia, in pursuance of the circular of the War Department, and will continue to collect for the Institute.

The observations of Dr. Samuel Webber on Instinct were referred to the Department of Medicine.

The observations of Rochet d'Hericourt were referred to the Department of Astronomy.

The Department of Chemistry, to which was referred a paper from J. P. Espy, Esq., "on the dew-point and some of its uses," made a report, which was accepted.

The Department of Medicine reported the following organization:

Dr. Thomas Sewall, *Chairman.*
Dr. J. M. Thomas, *Vice Chairman.*
Dr. Harvey Lindsley, *Secretary.*

The letter from Mr. Camack, reported by the Corresponding Secretary, was read and referred to the Curator.

The letter from M. Quetelet, also reported by the Corresponding Secretary, and the documents transmitted, were referred to the Department of Medicine.

Stated Meeting, December 12, 1842.

The Corresponding Secretary announced the following contributions and deposites:

For the Cabinet.

Fossil Shells and a Bone, of the Medial Tertiary Formation, Patuxent River, Maryland.—*From Joseph Simms, St. Mary's County.*

Dried Flower, in seed, from Chimborazo.—*From Seth Sweetzer, U. S. Consul, Guayaquil.*

Box of Copper Ores, &c., &c., &c., from the mines of Oroa.—*From Franklin Litchfield, U. S. Consul, Puerto Cabello.*

Box of Dried Flowers and Plants, &c., &c., (list with letter,) Bedouin Sabre with Sheath, Bedouin Shield made of Rhinorceros' hide.—*From J. Henshaw Belcher.*

Box containing Hieroglyphical Slab of Stone, from Palenque, Central America.—*From Charles Russell, Consul of the United States at Laguna, Isla del Carmen, Mexico.*

Box containing Fused Musket Barrel, from the Tower of London.—*From Lieut. W. R. Palmer, U. S. Top. Engineers.*

Franklin Press, being the original press at which Dr. Franklin worked.—*From John B. Murray, New York.*

Box of Fossils, &c., from the coal mines near Richmond, Virginia, with a Journal of Minutes kept in the mine.—*From A. S. Wooldridge.*

Box Stalactites, Stalagmites, &c., from Howe's Cave, Schoharie, New York.—*From Giles F. Yates.*

One specimen Meleagris gallopavo, (Wild Turkey,) from Maryland. —*From Col. P. Force.*

One specimen Echinus; one specimen Dromia; three specimens Spongia, &c., from the Sandwich Islands.—*From John K. Townsend.*

Fringilla, from Bermuda.—*From Mrs. Lenox, Washington.*

Myrmecophaga, (Ant-eater,) from South America.—*From J. J. Drake, New York.*

Arvicoia xanthognata, from Maryland.—*From Peter Naylor, Washington.*

Parbaria cucullata.—*From Don Carlo Paperini.*

Indian Robe, from the vicinity of Green Bay, Michigan.—*From M. J. McClery, Washington.*

Human Skeleton, (Negro.)—*From O. P. Thackara, Philadelphia.*

Horse-Shoe Fish.—*From Daniel Campbell.*

Hornet's Nest.—*From James A. Cooper.*

Vegetable Impressions on Slate, from the coal mines of Pennsylvania. —*From Robert B. Boyd.*

Thirty-nine Indian Arrow-heads, from near Rock Creek, George-

town, and other places; White Oak Acorns of three varieties.—*From Joshua Pearce.*

Skin of an Ant Bear.—*From J. J. Drake, of New York, through Dr. King.*

Continental Note of forty dollars, Philadelphia, 1778.—*From Carr B. Thornton.*

Dragon Fly, from New Orleans.—*From Robert G. Cambbell.*

Trunk Fish of the Pacific Ocean.—*From David Ridgley.*

Two English Copper Coins.—*From Captain Easby.*

Two Shells, from the mouth of Wheeling Creek, Ohio.—*From Major Williams.*

Two Silver Coins of Mexico.—*From Rev. Mr. Richards.*

Calcareous Spar, Stalagmite: Carbonate of Lime, large Stalactite; four specimens Carbonate of Lime, small Stalactite.*—*From Giles F. Yates, Schenectady*

Ortyx virginiana, (Quail,) from Maryland.—*From Peter Naylor, Washington.*

For the Library.

Etudes Numismatiques et Archeologiques, par Joachim Lelewel; octava, Bruxelles, 1840.—La Couronne de Poland et sa Royauté, by the same.—Analyse et Parallèle des trois Constitutions Polonaises de 1791, 1807, 1815, traduit du Polonais par E. R.; Arras, 1833, by the same.—Huitième Anniversaire de la Révolution Polonaise du 29 Novembre, celebré à Bruxelles, 1838.—Anzième Anniversaire de la Revolution Polonaise du 29 Novembre, celebre à Bruxelles, 1838.—Dixième Anniversaire de la Revolution Polonaise du 29 Novembre, celebré à Bruxelles, 1838, by the same.—Type Gaulois ou Celtique Atlas, Bruxelles, 1840, by the same.—Antiquités de Pologne de Lituane et de Slavonie Expliquées, No. 1, Bruxelles, 1842, by the same. *From Joachim Lelewel, Bruxelles.*

On the Law of Storms, by Lieut. Col. Reid, Governor of Bermuda, 2d edition, enlarged, with Charts; London, 1841.—*From the Author.*

Manuscript Names of Visitors to the Franklin Press, in Europe and America.—*From John B. Murray.*

Galarie de Florence gravée sur Cuivre, et publiée par une Societé d'Amateurs, sous la direction de L. Bartolini, I. Bezzuoli et E. Jesi, avec un Texte en Français, par Alexandre Dumas, folio; Florence, 1842, 1st et 2d livraisons.—*From John Carroll Brent.*

Trattado di Clinica, Chirurgica, di Placido Portal, vol. 1; Trappani,

*These are characteristic of formations found in "Howe's Cave," Ossowras Mountain, Schoharie, New York. This cavern was first discovered in May, 1842, and explored by Mr. Yates on the fourth of August, 1842. The large stalactite was taken from an apartment in the cavern about three miles from its entrance.

1836.—Storia di due Casi, d'Allagiatura d'Arterie, una alla Femorale, l'Altra all 'Iliaca Esterna, Osservazioni di Placido Portal, 1839.—Memorie Medico-Chirurgiche di P. Portal, vol. II; Napoli, 1836.—Sull 'Ernie Ossevazioni di P. Portal; Napoli, 1842.—*From the Author.*

Farmer's Register, &c., by Edmund Ruffin, Petersburg, Virginia, Vol. X., Nos. 9 and 10.—*From Mr. Ruffin.*

Fourth Annual Report of the Royal National Institution for the Preservation of Life from Shipwreck.—Letter to Lord John Russell, on the Preservation of Life from Shipwreck.—*From Hon. John C. Spencer.*

Molusca, Fresh Water and Land Shells of Vermont, by Professor Charles B. Adams, A. M., Middleburg College, Vermont.—*From the Author.*

Literary Age, Vol. 1, No. 1; Philadelphia, 1842.—*From the Editor, Reynell Coates, M. D.*

Catalogue, &c., of Dartmouth College, New Hampshire.—*From*

Royal Gazette, Bermuda, November 1, 1842, containing Meteorological Tables.—*From Governor Reid.*

Annales de l'Institut d'Afrique, No. 9, September, 1842.—*From H. Wheaton, American Minister, Berlin.*

Catalogue of the Public Library of Geneva, 2 vols., 8vo.—*From Dr. F. Hall.*

Old and New Testaments in the Native Language, from the Sandwich Islands, 2 vols., 8vo.—Dialogues for Schools, 1 vol., 12mo.—Seven Newspapers in the Native Language, "*Ke Kuma Hawaii.*"—Two Newspapers in the English language, "*The Polynesian,*" published at Oahu, Sandwich Islands.—*From John K. Townsend.*

Discourse delivered before the Historical Society of Pennsylvania.—*From Job R. Tyson, Esq., Philadelphia.*

Letters from George Washington to Arthur Young, Esq., F. R. S., agricultural subjects.—*From J. F. Callan.*

Essay on the Means and Importance of introducing the Elements of Geometry into the General Plan of Education, by Dr. McCurdy, of Fairhead.—A Sermon, by John C. Smith.—*From John Varden.*

The following letter was read:

GEORGETOWN COLLEGE, *December* 7, 1842.

DEAR SIR: I take great pleasure in requesting through you the acceptance by the National Institute of a box of books herewith presented, as a small pledge of the interest we all take in the advancement and success of so truly National an Institution.

With very high regard, I am, dear sir, yours truly,

JAMES RYDER.

Addressed to the Curator.

List of books accompanying the letter:

Renwick on the Steam Engine, 1 vol., octavo.
Lindley's New System of Botany, 1 vol., octavo.
Enfield's New Philosophy, 1 vol., octavo.

Elementa Physica, 1st volume.
Doway Bible, 1 vol., quarto.
Biblia Sacra, 1 vol., quarto.
Ward's Errata, 1 vol., quarto.
Jansenii Evangelæ, 1 vol., quarto.
Bibliorum Sacrorum Editio, 8 vols., octavo.
Histoire Ancienne Rollin, 14 vols., duodecimo.
Vies des Saintes, 16 vols., duodecimo.
Ferguson's Astronomy, 1 vol., octavo.
Simson's Euclid, 1 vol., octavo.
Bonnycastle's South America, 1 vol., octavo.
Duncan's Cicero, 1 vol., octavo.
Anti-Christian Conspiracy, 1 vol., octavo.
Les Cinq Codes, 1 vol., octavo.
Politique Tirée de l'Ecriture, 3 vols., octavo.
Martini Polizia Medica, 3 vols., octavo.
Æmilius Laurlenti Martinii, 2 vols., octavo.
Nouveau Testament, 2 vols., octavo.
Middleton on Greek Article, 1 vol., octavo.
Juvenal Delphini, 1 vol., octavo.
Penal Laws, 1 vol., octavo.
Pensées du Bourbalone, 2 vols., octavo.
Conchology, 1 vol., octavo.
Pastorini's Christian Church, 1 vol., octavo.
Poland under Russia, 1 vol., octavo.
Jamin Pensées, 1 vol., octavo.
La Verité Prouvée, 1 vol., octavo.
Processionale Romanum, 1 vol., octavo.
Concilium Tridentinum, 1 vol., octavo.
Xenophon's Anabasis, 1 vol., octavo.
Missale Romanum, 1 vol., folio.
Essais sur l'Atlantique, 1 vol., octavo.
Voile Levé, 1 vol., octavo.
Sabund le Creature, 1 vol., octavo.
Temporum Notio, (Danes,) 1 vol., octavo.
Melanges Religieux, 1 vol., octavo.
Biblia Vindicata, 1 vol., octavo.
Tacité Annales, 1 vol., octavo.
Mary Queen of Scots, 2 vols., octavo.
Demosthenes' Orations, 2 vols., octavo.
Life of Chrysostom, 1 vol., octavo.
Existence de Dieu, 1 vol., octavo.
Perseus Juvenalis, 1 vol., octavo.
Spectator, 10 vols., octavo.
Xenophon's Cyropædia, 1 vol., octavo.
Grammatica Græca, 1 vol., octavo.
102 volumes.

Letters and Communications.

From C. A. Hassler, U. S. S. Decatur, Buenos Ayres, March 8, 1842.

From Chapman Billingsley, St. Mary's County, Maryland, July 1, 1842: Transmitting fossil bones and shells to be presented to the Institute, in the name of Mr. Joseph Simms, his neighbor.

From Baron du Boa Vista, Pernambuco, Brazil, September 26, 1842: Acknowledging membership, and offering his services.

From John P. Brown, First Drogaman, Constantinople, September 27, 1842: Stating that he has forwarded to the Collector at Boston a series of coins of the Ottoman Empire, one hundred and ninety-three in number; and that he will forward other coins as he collects them.

From Theodore S. Fay, Secretary of Legation, Berlin, October 19, 1842: Enclosing a letter to him from the Secretary General of the Royal Museum, which contained one from Mr. Olfers, the Director of the Museum, acknowledging letter and documents from the Institute, and sending catalogues of the Museum.

From Joachim Lelewel, Brussels, October 19, 1842: Acknowledging with thanks the honor of membership conferred upon him, and presenting several works of which he is the author.

From General José Maria Tornel, Minister of War and Marine, Mexico, November 3, 1842: Presenting to the Institute by the hands of Mr. Brantz Mayer, three boxes of valuable minerals, &c., &c., from the silver mines of Guanajuato.

From Elias Loomis, West. Reserve College, November 10, 1842.

From D. Appleton & Co., (to Mr. Webster,) New York, November 12, 1842: Transmitting Gov. Reid's (of Bermuda) work on the law of storms, presented by the author.

From Hon. Abbott Lawrence, Boston, November 15, 1842: Has received the circular of the Secretary of War, and asks for more copies of it for distribution.

From Seth Sweetzer, U. S. Consul, Guayaquil, Washington, November 16, 1842: Presenting a dried flower in seed from a height on Chimborazo to which Humboldt ascended, which he hopes may be attempted to be cultivated in the District.

From Bevan & Humphreys, Philadelphia, November 16, 1842: Informing Secretary that a box of minerals from Franklin Litchfield, Consul Puerto Cabello, had been received by them for the Institute.

From John Wyman, Baltimore, November 16, 1842: Offering for sale to the Institute curiosities, &c.

From Bevan & Humphreys, Philadelphia, November 18, 1842: Acknowledging letter, and enclosing bill of lading for box of minerals received by them from Mr. Litchfield.

From J. Henshaw Belcher, Philadelphia, November 18, 1842: Stating that he had presented to the Institute, through Mr. Adams,

an ancient Chinese map, &c. Will send several plants, of which he gives a list; also, a Bedouin sabre and sheath, and a rhinoceros shield.

From John K. Townsend, Washington, November 18, 1842: Furnishing list of names of forty-two valuable birds presented by him at the last meeting, in the name of Dr. George C. Leib, of Philadelphia.

From Henry Bond, Philadelphia, November 18, 1842.

From John Cassin, Philadelphia, November 19, 1842.

From John G. Morris, D. D., Baltimore, November 19, 1842: Offering to the Institute a descriptive catalogue made by himself of the diurnal lepidoptera of the United States, for publication in the bulletin, and asking upon what terms such articles are inserted. Stating, also, that the Entomological Society of Pennsylvania is preparing a catalogue of coleoptera of the United States, which they will offer to the Institute for publication in its next bulletin.

From Howland & Aspinwall, New York, November 21, 1842: Enclosing bill of lading for antique slabs from Palenque, presented by C. Russell, Consul at Laguna, Isla del Carmen, Mexico, being similar to those presented by him in September last.

From R. R. Waldron, U. S. N., (Purser,) Washington, November 22, 1842.

From Levi Lincoln, (Collector,) to Mr. Webster, Boston, November 22, 1842.

From Lieut. W. R. Palmer, U. S. Topographical Engineers, Philadelphia, November 23, 1842: Forwarding a box.

From John B. Murray, Philadelphia, New York, November 24, 1842: Respecting the Franklin press, presented by him to the Institute, &c., &c.

From Lieut. G. S. Welcher, U. S. Engineers, Washington, November 24, 1842: Asking for copies of the bulletins for a friend who is interested in the Institute, &c.

From A. S. Wooldridge, (to Mr. Spencer,) Midlothian, Virginia, November 26, 1842: Informing him that he had forwarded a box of specimens from the coal mines, &c., and a journal of minutes kept in the mines, and will forward other things.

From Giles F. Yates, (of Albany,) Washington, November 26, 1842: Offering a box containing specimens from Howe's Cave, lately discovered in Schoharie County, New York.

From the same, November 28, 1842.

From J. H. Causten, Jr., M. D., Washington, November, 1842.

From John Carroll Brent, Washington, December 2, 1842: Presenting the first two livraisons of engravings of the Floretine gallery of portraits, with descriptive text, &c.

From Josiah F. Polk, Washington, December 6, 1842.

From J. G. Syz, Swiss Consul, Philadelphia, December 8, 1842: In answer to a letter from Corresponding Secretary, asking whether

he could conveniently forward to eight Swiss Societies, enrolled in the list of correspondents of the Institute, letters, &c., from the latter, and complying with the request.

From P. A. Browne, Philadelphia, November 20, 1842: Respecting Mr. Spencer's circular, &c.

From P. S. Duponceau, Philadelphia, November, 1842: Respecting Mr. Spencer's circular, &c.

From the same, December 8, 1842: Same subject.

From Rev. John G. Morris, D. D., (to Col. Totten,) Baltimore, December 8, 1842: Forwarding manuscript descriptive catalogue of insects referred to in another letter, for publication in next bulletin.

From Thomas M. Mütter, M. D., Philadelphia, December 9, 1842.

From Theodore F. Moss, Engineer of Mines, Philadelphia, December 10, 1842: Asking how he is to forward a work on the Bute docks given him by Capt. Smyth, Royal Navy, for the Institute, &c.

From Col. John H. Wheeler, Lincoln County, North Carolina, November 16, 1842: Presenting, through the Rev. Mr. Brown, a box of gold and silver ores from North Carolina, and a report made to the Secretary of the Treasury respecting the gold mines of North Carolina.

From Charles Cramer, Secretary of the Imperial Mineralogical Society, St. Petersburg, September 25, 1842: Acknowledging membership; referring to former transmissions of books, &c., from himself and the Mineralogical Society; stating that the Mineralogical Society will be happy to correspond with the Institute; asks for duplicates of the bulletins, the originals having never been received; sends two volumes of the Society's transactions, in Russian, as a curiosity.

From J. F. Callan, Washington, December 8, 1842: Presenting seeds of the Sylphinus gummifera, said to be identical with the polar plant; the seed from Mississippi, and grown in Georgia.

It was announced that eight Swiss Scientific Societies had been enrolled in the list of correspondents of the Institute since the last meeting, to which the Corresponding Secretary had addressed letters, accompanied by the publications of the Institute, under the order, and official sanction and signature, of the President of the Institute.

Stated Meeting, January 9, 1843.

Dr. J. H. Causten, Jr., Librarian, made the following report, from the Historical Department:

The undersigned has the honor to make the following report, as to the condition of the library of the National Institute.

The whole number of books and pamphlets belonging to, and deposited in the library, amounts to 1940, viz:

Volumes,	904
Pamphlets,	1036
	1940

of which number there were derived from the Columbian Institute,

Volumes,	43	
Pamphlets,	178	
		221
Smithsonian Bequest,		
Volumes,	113	
Pamphlets,	85	
		198
American Historical Society,		
Volumes,	58	
Pamphlets,	105	
		163
Deposited by Mr. Castelneau,		
Volumes,	150	
Pamphlets,	70	
		220
		802
Direct presentations to the National Institute from scientific institutions, and from its own members,		1138
		1940

Besides which may be enumerated fifty-three maps, many of which are rare and curious.

A full and regular catalogue of the books has been prepared, which the undersigned has the honor to submit herewith. No system of loans has been adopted as yet, excepting to the gentlemen immediately occupied in the scientific classification of the specimens, &c., arranged in the Hall, who have free access to the Library at all times. It has not been thought convenient to loan the books to the members of the Institute generally, until a respectable number of publications on various branches of literature and science should have been collected together, so as to form a tolerably well chosen library, and until the Institute should have adopted a regular plan for the safe return of such books as should be borrowed.

The Philadelphia Library requires from each person who borrows a book, a bond for a specified sum far exceeding the value thereof, which on its return is cancelled.

Appended hereto is a list of books formerly in the library of the American Historical Society, now become the property of the Institute, which have never been delivered over: they are probably in the possession of gentlemen who were members of the Historical Society, and should be returned.

The undersigned would suggest the propriety of having an emblematic seal or stamp engraved, for the purpose of stamping each book, pamphlet, map, print, or M. S., which is presented to the Library. This mode of marking would be neat and appropriate, and would be a safer guarantee for the return of borrowed books, than the simple mark with a pen now made use of. The cost would be a mere trifle.

In June, 1841, before the undersigned took charge of the Library, Captain Chase, of the Engineer Corps, presented to the Institute fifteen original letters in M. S., from Generals Washington, Heath, Hamilton, and other distinguished characters of the Revolution, addressed to the Honorable John Hancock, President of Congress. When these papers were handed to me, on my taking charge of the Library, I observed that No. 1, purporting to be a letter from General Washington, was missing; and that No. 2, in the M. S. of General Washington, and No. 3, in the M. S. of Mr. Jefferson, had had the signatures cut from them. I immediately called the attention of the then Curator, Dr. King, from whom I received them, to this circumstance, who informed me that he had examined them at the time of their receipt, and had then observed the mutilation of the two letters, and also stated that the missing letter was probably mislaid among the papers of the Institute. I also called the attention of the Vice President to the fact, who agreed with me in

the propriety of obtaining from Dr. King a memorandum to that effect, which is appended to this report. I regret to add that the missing letter has not yet been found.

All which is respectfully submitted.

JAMES H. CAUSTEN, Jr.

Historical Society Books, &c., wanting.

Memoires de Kee of Keesland, presented by Mr. Machen.
Sewall's Examination of Phrenology, presented by Dr. Sewall.
Old Indian Chronicle, presented by Mr. Drake.
Notice of Plants in the environs of Bahia, presented by J. E. Derby.
Nicollet's Essay on Meteorological Observations, presented by J. Gideon, Jr.
A Letter to the Lord Chancellor, presented by Mr. Fendall.
Southard's Oration on Wirt, presented by Mr. Fendall.
Lord Cornwallis' two letters (M. S.) to Mr. Lear, presented by Mr. Hebb.
View of President's House, after conflagration in 1814, presented by G. Watterston.
View of Capitol, after conflagration in 1814, presented by G. Watterston.
Death Warrant of Charles I, presented by P. Thompson.
London and Westminster, temp. Saxons, presented by P. Thompson.
Do. do. temp. Elizabeth, presented by P. Thompson.
Magna Charta, fac simile of, presented by P. Thompson.
American Medals struck in France, presented by Mr. Brent.

Belonging to National Institute.

Fauna Columbiana, (M. S.,) presented by Dr. Frye.

Washington, *January* 7, 1843.

I recollect that at the time I first saw the letters presented by Captain Chase, in June, 1841, to the National Institute, two letters, one purporting to be from General Washington, the other from Thomas Jefferson, had their signatures cut off. I also think there was a letter, No. 1, not now in the bundle, and which I presume has been mislaid.

H. KING.

Dr. Sewall, from the Medical Department, made a report, which was adopted.

Dr. Lindsley, from the Medical Department, made a report, which was adopted.

The committee to which was referred the letter of M. Quetelet, and the pamphlet of M. Schwann, relative to the periodical phenomena of man, made a report.

Dr. Wynne, from the Medical Department, made a report on "Remarks on Instinct, being an Investigation of the View of it promulgated by Dr. Good," by Dr. Samuel Webber, of New Hampshire.

Annual Meeting,

Held on the 25th January, 1843, for the Election of Officers.

The following officers were elected:

Hon. Joel R. Poinsett, *President.*
Peter Force, *Vice President.*
Francis Markoe, Jr., *Corresponding Secretary.*
G. R. Barry, *Recording Secretary.*
W. J. Stone, *Treasurer.*

Directors.

Hon. Levi Woodbury,
Hon. R. J. Walker,
Col. J. J. Abert,
Col. J. G. Totten,
A. O. Dayton,
Lieut. M. F. Maury.

Stated Meeting, February 13, 1843.

The committee to which was referred the report of the Treasurer for 1842, reported the same, examined and found correct.

Adjourned Meeting, February 20, 1843.

The following donations were announced:

For the Cabinet.

Sturnella ludoviciana, from Washington.—*From Francis Turner.*
Didelphus virginiana, (Opossum,) from Maryland; two specimens of Procyon lotor, (Racoons,) from Maryland.—*From Peter Force.*
Strix asio, from Washington.—*From R. G. Campbell.*
Two specimens of Lead Ore, from Tellville, Arkansas; Sulphuret of Lime, from Pike County, Arkansas,—*From Edward Cross.*
Gerbillus canadensis, Mus leucopus, fifty Insects, from Pennsylvania.—*From Samuel W. Woodhouse, Philadelphia.*
Coral, from Long Island.—*From William Carpenter.*
Emberiza nivalis, (Snow Bunting, living.)—*From Mrs. Lenox.*
Felis rufa, (Wild Cat,) from Carlisle, Pennsylvania.—*From W. M. and S. F. Baird.*
Specimen of fine Writing, the Lord's Prayer in a circle of quarter of an inch diameter.—*From Benjamin B. Davis.*
Two Continental Notes.—*From John T. Towers.*
One Continental Note of Rhode Island.—*From Joseph M. Lyon.*
Five Shells.—*From Edward Smith.*
Palate of a Fish.—*From Wm. Owen.*
Copper Coin.—*From Master Kendall.*
One Cornelian, and one Topaz.—*From Dinwiddie B. Philips.*
One three cent Note of the State Bank of New York.—*From H. L. Ellsworth.*
One specimen Troglodytes ludovicianus.—*From Peter Naylor.*
Large Glass Ship.—*Deposited by Wm. A. Griffith.*
One English Copper Coin of 1738.—*From Joseph S. Hedges.*
Skin of a Gar Fish, from the Potomac River.—*From T. Purrington, M. D.*

One old Land Chart of 1742.—*From James R. Furgeson.*

Two Indian Arrow-Heads, from Virginia; one Shell, and one Stone Tomahawk, from Virginia; one Stalactite, from Wier's Cave.—*From Carr Thornberry.*

Eight Copper Coins, six Silver Coins, and eleven Tokens.—*From James Howks.*

One Corporation Note of Washington City.—*From S. P. Franklin.*

Plaster Bust of Hon. Levi Woodbury.—*From H. L. Ellsworth.*

One Silver Coin of Prussia, 127 years old.—*From Maurice Whail, Baltimore.*

Several old Newspapers relating to the City of Washington.—*From John Sessford.*

Stated Meeting, March 13, 1843.

The Corresponding Secretary announced the following contributions and deposites:

For the Cabinet.

Box, containing Coal, Fossils, and Huano.—*From W. Wheelright, Chile.*

Box of Minerals, &c., from South America.—*From General Semple, late Chargé d'Affaires, Bogota.*

Box of Minerals, Fossils, &c., from Wisconsin.—*From Stephen Taylor and General Smith, Mineral Point, Wisconsin.*

Bottle, containing specimen of the Hand Flower of Mexico.—*From Peyton A. Southall, Baltimore.*

Jar, containing Fish; Jar, containing Centipedes; Skin of a Sea Wolf.—*From C. P. Patterson, U. S. Navy.*

Package of dried Plants, from the highest Mountains of South America.—*From Professor Jameson, Quito, by the hands of Seth Sweetzer, Consul of the United States, Guayaquil.*

Box of Minerals and Silurian Fossils of New York.—*From Jona Pearson, Librarian and Curator of Museum of Natural History, Union College, Schenectady.*

Specimens of Bitumen, pure and mixed with pebbles, from Cuba.—*From the Hon. Daniel Webster.*

Box of Minerals, &c., from the Hon. Daniel Webster.—*From T. B. Livingston, U. S. Consul, Halifax, Nova Scotia.*

For the Library.

American Quarterly Register and Journal of the American Education Society of Boston, (series complete.)—*From Samuel H. Riddell, Secretary of the Society.*

Estatutos de la Sociedad Economica Barcelonesa de Amigos del Pais,

1840.—Exposicion de la Misma, 1840.—Exposiciones de la Misma, 1842.—*From the Society.*

Revista Americana, Mexico, tome 1, 183, su contenido, "Observaciones hechas en dos Escursiones al Volcan Popocatepelt, desde la Capital de Mexico en 1833 y 1834, por M. Gerolt, Prussian Minister, Mexico.—*From the Author.*

First, Second and Third Reports of the Geology of Maine.—Exploration and Survey of the Aroostook Territory.—*From Zina Hyde, Baste, Maine.*

Revision and Re-arrangement of the Constellations, with reference to the Southern Hemisphere, &c., by Sir J. F. W. Herschel, &c., &c.; London, 1841.—*From Capt. W. H. Smyth, Royal Navy.*

Map of Central Asia, with a letter on the Geography of Central Asia, by H. Wheaton.—*From Mr. Wheaton, American Minister, Berlin.*

Journal de l'Ecole Polytechnique, &c., 27th and 28th numbers, quarto; Paris, 1839, 1841.—*From Marshal Soult.*

Nautical Observations on the Port, &c., of Cardiff, Wales, &c., &c., &c., by Capt. W. H. Smyth, Royal Navy.—*From the Author.*

Biographical Sketch of the Most Rev. John Carroll, first Archbishop of Baltimore, &c., &c., edited by John Carroll Brent, 1843.—Letter to the American Peace Society; Paris, 1842.—*From John Carroll Brent.*

Bulletin de l'Academie Royale, &c.; Bruxelles, No. 9, tome 8, 1841.—*From the Academy.*

Resumé des Observations sur la Météorologie, sur le Magnétisme, &c., &c., par M. Quetelet, 1841.—Statuts Organiques de la Commission Centrale de Statistique; Bruxelles, 1841.—Edudes Embryogéniques par P. J. Van Beneden; Bruxelles, 1841.—Industrie Française, Rapport, &c., par J. B. et M. Jobard, tome 1, 1841.—The same; tome 2, 1842.—Du Spiritualisme du XIXme Siècle, ou Examen de la Doctrine de Maine de Birau, par L. A. Gruyer.—De la Liberté Physique et Morale, par M. Gruyer; Bruxelles, 1839.—*From M. Quetelet, Astronomer Royal and Perpetual Secretary of the Academy of Sciences, Brussels.*

Bermuda Gazette, Nos. 15, 22, and 29, and December 6, 1842, containing Meteorological Tables.—*From Governor Reid.*

Transactions of American Philosophical Society of Philadelphia, vol. 7, new series, part 2, 1842.—*From F. Dayton.*

Proceedings of the Academy of Natural Sciences of Philadelphia, November and December, 1842, Nos. 20 and 21.—*From the Academy.*

Proceedings of American Philosophical Society of Philadelphia, November and December, 1842, No. 24.—*From the Society.*

Turkish Gazettes, (two.)—*From W. W. Andrews, U. S. Consul, Malta.*

Six volumes relating to the Royal Museums of Berlin, 1834, 35, 36, 38, 40, and 41.—*From Theo. S. Fay, Secretary of Legation, Berlin.*

Essay on the Veterinary Art, by P. A. Browne, Philadelphia.—*From the Author.*

Observations on Encke's Comet, &c., &c., by Sears C. Walker and E. O. Kendall, May, 1842.—*From the Authors.*

American Railroad Journal, &c., several numbers.—*From*

Specimen Book of Types, &c., cast at the Baltimore Type Foundry.—*From F. Lucas, Jr.*

Young People's Book, November, 1842, edited by Professor John Frost and T. S. Arthur, Philadelphia.—*From the Editors.*

The Literary Age, No. 5 and No. 10, vol. 1, January and February, 1843, by Reynell Coates.—*From the Editor.*

Circular, Programme of Lectures on Egypt, by George R. Gliddon.—*From Mr. Gliddon.*

Prince's Annual Catalogue, 1842.—*From W. R. Prince & Co., New York.*

Directions for preserving Objects of Natural History, (2 papers.)—*From George Gibbs, New York.*

Annual Message of Gov. Richardson, of South Carolina, November 29, 1842.—*From Gov. Richardson.*

Report on the Onondaga Salt Springs, January, 1843.—*From O Root, Syracuse.*

Abstract of Correspondence.

Letters—

To J. G. Syz, Consul General, Switzerland.

To M. Quetelet, Astronomer Royal and Perpetual Secretary, Academy of Sciences, Brussels: Communicating copy of the report of the committee to which was referred his letter and M. Schwann's pamphlet on the periodical phenomena of man, &c.

To Hon. J. R. Poinsett, President, &c., &c.: Announcing his re-election on the 25th of January, as President of the Institute.

To George C. Leib, M. D., Philadelphia: Communicating copy of vote of thanks for his large and valuable donation of birds, &c.

Letters and Communications.

From Samuel H. Riddell, Secretary Education Society, Boston, April 14, 1842: Sending various numbers of the American Quarterly Register of the Edinburg Society, making the series complete, and promising to forward the further numbers as they come out.

From la Sociedad Economica de Amigos del Pais de Barcelesa, Spain, T. J. y Blaguez, Secretary, July 4, 1842: Acknowledging receipt of letter of June 1, and enclosing for the Institute printed copy of its statutes, and of a representation made by the Society to the Government of Spain, &c., &c.

From the Rev. Peter Parker, Missionary to China, September 9, 1842: Thanking the Institute for making him a member, and promising to exert himself to procure contributions, &c.

From W. Wheelright, Talcahuano, Chile, September 11, 1842: Acknowledging letter, announcing his membership, with thanks. Sending a box of fossils, coal and *huano*, which he describes; and describing, also, the coal of Chile, and its use for steamers.

From Professor Fischer, Imperial Botanic Garden, St. Petersburg, October 7, 1842: Acknowledging with thanks his election as a member, and the receipt of various documents, one set of which has been deposited in the library of the Botanic Garden, and suggesting that future correspondence between the two Institutions may pass through the Legations of the two countries.

From the British Museum, J. Forshall, Secretary, October 17, 1842: Returning thanks for the first and second bulletins, which have been placed in the library of the Museum.

From M. Gerolt, Prussian Minister, Mexico, November 3, 1842: Sending copy of a work, of which he is the author; &c., &c.

From Geological Society, London, W. J. Hamilton, Secretary, November 17, 1842: Acknowledging the receipt of, and thanking the Institute for, the first and second bulletins, &c.

From the Royal Scottish Society of Arts, James Tod, Secretary, Edinburg, November 18, 1842: Has forwarded vol. 2, part 2d, of transactions of the Royal Scottish Society of Arts, and charter, laws, and list of members. Will be happy to receive the publications of the Institute, &c.

From Zena Hyde, Baste, Maine, November 18, 1842: Presenting first, second and third reports geology of Maine, and the exploration and survey of the Aroostook Territory, &c.

From R. F. Von Raders, Hague, November 20, 1842: Offering his services, &c., &c.

From W. H. Smyth, Chelsea, November 24, 1842: Transmitting copy of Sir John Herschell's proposed reform of the heavens, &c.

From Henry Wheaton, American Minister, Berlin, December 1, 1842: On the geography of Central Asia, (with a map.)

From Peter S. Duponceau, Philadelphia, December 8, 1842: Respecting Mr. Spencer's circular.

From W. J. Budington, Charlestown, Massachusetts, December 9, 1842.

From Hon. John Reynolds, House of Representatives, Washington, December 13, 1842: Requesting the Corresponding Secretary to send to his house for a box of curiosities brought on by him as a present, from General Semple, late Chargé d'Affaires of the United States at Bogota, for the Institute.

From H. Ledyard, Chargé d'Affaires of the United States, Paris, December 13, 1842: Transmitting, by request of Marshal Soult, the

27th and 28th numbers of "Journal de l'Ecole Polytechnique," for the Institute.

From James Tod, Secretary Royal Scotch Society of Arts, Edinburg, December 13, 1842: Presenting thanks of the R. S. S. A. for the first and second bulletins, &c.

From the Highland Agricultural Society of Scotland, Charles Gordon, Secretary, Edinburg, December 16, 1842: Thanking the Institute for first and second bulletins, &c.

From H. A. S. Dearborn, Boston, December 23, 1842: Communicating a paper addressed to Hon. Mr. Preston and Mr. Poinsett, on the subject of a Government Horticultural and Agricultural Establishment, &c.

From Stephen Taylor, Mineral Point, Wisconsin, December 9, 1842: Stating that he and General Smith had shipped in October last a box for the Institute.

From Theodore F. Moss, Philadelphia, December 13, 1842: Acknowledging letter, and sending on a volume presented by Capt. Smyth, Royal Navy.

From Michael Chevalier, Paris, December 13, 1842: Returning thanks for the honor of membership, and expatiating on the value and importance of the National Institute.

From Dr. C. Pickering, Curator, Washington, December 12, 1842: Enclosing a letter from Henry Moore, of Baltimore, to Mr. Ellsworth, offering to deposit a collection of plants, minerals, fossils, &c., of the United States, for which he hopes the Institute will give him some compensation.

From Peyton A. Southall, Baltimore, December 15, 1842: Presenting specimen of the hand flower in a bottle, from the Imperial Botanic Garden, of the palace in Mexico, with a description, &c.

From Thomas B. Thorp, St. Francisville, La., December 16, 1842: Acknowledging letter of 12th of October. Is collecting curiosities, &c., of Lousiana, for the Institute, whose cause he is anxious to serve.

From C. P. Patterson, Lieut. U. S. Navy, Washington, December 20, 1842: Presenting two jars of fish and centipedes, and skin of a sea wolf.

From Rev. J. J. Robertson, (Missionary to Greece,) December 27, 1842.

From A. H. Palmer, American and Foreign Agency, New York, December 23, 1842: Acknowledging letter of 11th of October. Has charged against the Institute sundry postages on communications received for it.

From Lewis C. Beck, (Mineralogist, New York Survey,) New Brunswick, New Jersey, January 5, 1843: Respecting the double invitation from the Institute to the Association of American Geologists, &c., to meet at Washington; and offering minerals of New York State.

From A. A. Harwood, U. S. Navy, Secretary Naval Lyceum, New York, January 5, 1843.

From Seth Sweetzer, U. S. Consul, Guayaquil, Washington, January 6, 1843: Presenting package of dried plants from the highest mountains in America, from Professor Jameson, of Quito.

From Joseph Tuley, Tuilleries, January 9, 1843.

From Charles G. Page, Washington, January 9, 1843.

From Jonathan Pearson, Librarian and Curator Museum of Natural History, Schenectada, to the Curator of the National Institute, November 25, 1842: Presenting a box of minerals and silurian fossils, &c.

From Lieut. George M. Totten, U. S. Navy, Washington, January 13, 1843.

From Peter A. Browne, to the officers and members of the National Institute: On the subject of the meeting of scientific men called by Mr. Spencer's circular.

From Edward Curtis, Collector, New York, January 20, 1843: Transmitting transportation receipt for a box sent to his care per ship England, from Liverpool.

From Lieut. Benjamin Alvord, U. S. Army, Jefferson Barracks, Missouri, January 21, 1843.

From the same, letter No. 2: On the polar plant of the western prairies.

From Stephen Pleasonton, Auditor, Washington, January 26, 1843.

From John Carroll Brent, Washington, January 30, 1843.

From John Varden, Washington, January, 1843: Giving a list of certain books, &c., received by him.

From John C. Browne, U. S. Public Store, Custom House, Boston, February 3, 1843: Has received a box from Smyrna, and asks instructions how to forward it.

From Hon. Edward Cross, M. C., Washington, February 9, 1843.

From J. C. Brent, Washington, February 10, 1843: Presenting copy of a pamphlet on the establishment of a daily journal at Paris, as the organ of the American Peace Society, at the request of George W. Gibbs, and expressing a hope, on his own as well as Mr. Gibbs' part, that the Institute may be able to co-operate in the proposed plan.

From Lieut. M. F. Maury, U. S. Navy, (to Mr. Barry,) Washington, February, 1843.

From Hon. Joel R. Poinsett, Peedee, South Carolina, February 8, 1843: Acknowledging letter announcing his re-election as President of the National Institute, and returning thanks to the members.

The Corresponding Secretary submitted a letter from the Hon. Mr. Woodbury to the Vice President, enclosing letter from Professor Jackson, of New Hampshire, on the subject of the tin ores of that

State, together with a specimen of pure tin extracted from the ores, for the cabinet of the National Institute.

Mr. Lewis read a description of the apparatus used in making light in light-houses, from the earliest records to the present improved lenses and reflectors, and exhibited many interesting experiments with the Bude and Drummond lights.

On motion of Col. Kearney, it was

Resolved, That the thanks of the Institute be presented to Mr. Lewis for the experiments in lights exhibited this evening, and the description read by him; and that he be requested to furnish a copy.

Mr. Greenough, from the Department of Natural History, submitted two circulars.

Stated Meeting, April 10, 1843.

The Corresponding Secretary announced the following contributions and deposites:

For the Cabinet.

Box of Shells, &c., from Buenos Ayres and the River of Plate. *From H. W. Gilbert, Buenos Ayres.*

Specimens of Pickeringite, (a new Mineral;) four bottles of varieties of Native Nitrate of Soda, from Tarapaca, in Peru.—*From John H. Blake, Boston.*

Antique Piece of Sculpture, from Mexico.—*From George S. Curson.*

Specimens (five in number) of Insects, preserved between plates of Mica, one hundred years since, by one of the Knights of Malta.—*From Wm. B. Hodgson.*

Box, containing prepared specimen of Cancer digitatus, Pensacola Harbor.—*From Edward Coale.*

Molar Tooth of Megatherium, belonging to the suite of Fossils, from Georgia, presented to the Institute by Dr. Screven.—*From Dr. Screven, Savannah.*

Box, containing a series of Coins of the Ottoman Empire, (one hundred and ninety-three in number.)—*From John P. Brown, First Dragoman of the U. S. Legation, Constantinople.*

Ear of Corn grown in Georgetown, D. C.; each grain covered with a husk or covering.—*From John Trunnell.*

Portion of a Pine Tree of singular appearance, from the District of Columbia.—*From John Hilbus.*

Natural Coke, from north side of James River, twelve miles above Richmond.—*From Dr. Towers, Richmond, Virginia.*

Five Copper Coins.—*From Dr. Wm. Wallace.*

Two Monkeys, (*Simia*,) living, from Africa.—*From Major Turnbull.*

One Silver Coin.—*From Edward Stubbs.*

One German Coin.—*From Edward Smith, Philadelphia.*

Two Coins.—*From George Henley.*

One Box of interesting and valuable Fossils, from Ohio.—*From Edwin Fussell, M. D., through J. K. Townsend.*

Cluster of Oyster Shells attached to a Stone, from Annapolis, Md.—*From W. S. Green.*

Twenty specimens of Minerals, from Loudon County, Virginia.—*From J. B. Dutton.*

One Silver Token, or Bank of England Dollar, George III, 1804.—*From George A. Davis, Washington.*

Two Continental Notes.—*From George Lindweaver, Pennsylvania.*

For the Library.

Transactions of the Society for the Promotion of Agriculture in the Prussian States, part 32d, (vol. 16, part 1 ;) Berlin, 1842, quarto, (in German.)—List of Members and Corresponding Societies of the Prussian Horticultural Society, (in German.)—*From Professor Link, (Director,) in the name of the Society.*

Annuaire Magnetique et Meteorologique du Corps des Engénieurs des Mines de Russie, ou Receuil d'Observations Magnetiques et Meteorologiques, faites dans l'Entendue de l'Empire de Russie, &c., (published by order of the Emperor Nicholas I, and under the auspices of M. Le Conte Cancrine, Chief of the Corps of Engineers of Mines, and Minister of Finance,) par A. T. Kupffer, Année, 1840, (quarto ;) St. Petersburg, 1842.—*From Major Gen. Tcheffkine, Russian Mining Engineers.*

The same.—*From Count Cancrine.*

Annuaire du Journal des Mines de Russie, Anneé 1839 ; St. Petersburg, 1842, octavo.—*From Major General Tcheffkine, &c.*

Narrative of Capt. David Woodward and four Seamen, in the Island of Celebes, and Manners and Customs of the country, and an Introduction and Appendix, &c.; London, 1805, by Wm. Vaughan.—Tracts on Docks and Commerce, printed between the years 1793 and 1800, &c., with an Introduction, Memoir, and Miscellaneous Pieces, by Wm. Vaughan, Esq.; London, 1839.—*From the Author.*

Plan of the Canal which unites the River Mayn with the Danube, (Wheaton's letter, 25th of January, 1843.)—*From H. Wheaton, American Minister, Berlin.*

First, Second, Third, and Fourth Annual Reports of the Ohio Lunatic Asylum, for 1839, 1840, 1841, 1842.—*From Dr. W. M. Awl, Superintendent, by the hands of the Hon. James Matthews, M. C.*

History and Memoirs of the Imperial Society for the General Mineralogical Sciences, of St. Petersburg, (in German,) vol. 1, in 2 parts, octavo ; St. Petersburg, 1842.—Summary of the Fossils of

Würtemburg, with reference to their Geognostic Relations, by Dr. J. C. L. Hehl, of Stuttgart; St. Petersburg, 1834, (in German.)—Review of the Wernerian and Huttonian Theories of Geology, by Dr. A. Kaemmerer, (in German;) St. Petersburg, 1834.—The Muschel Kalk of Thuringia and the older Limestone of Würtemburg, with reference to their Fossils, by C. F. Stahl; St. Petersburg, 1834, (in German.)—Revue des Fossiles du Government de Moscow, par G. Fischer de Waldheim, No. 1, Belemnites, (extracted from the bulletin of the Imperial Society of Naturalists, of Moscow, vol. 15, 1842.)—On a new Mineral termed Volborthite, by H. Hess, (in German.)—*From Charles Cramer, Secretary of the Imperial Society for the General Mineralogical Sciences, of St. Petersburg.*

Lithograph of the American Telegraph of H. J. Rogers, with Explanations.—*From Mr. Rogers.*

First Annual Report of Births, Deaths, and Marriages in Massachusetts, February, 1843.—*From Aug. A. Gould, Boston.*

Printed account of some Antiquities brought home by Commodore Elliott from the Mediterranean, from the Malta Gazette, February 28, 1838.—*From W. B. Hodgson.*

Tableau Systématique des Oiseaux Coloriés de Temminck, (manuscript copy,) folio.—*From Edward Harris, New Jersey.*

Transactions of the Royal Scottish Society of Arts, vol. 1, part v; vol 2, parts 1 and 2, in 2 volumes; Edinburg, 1841 and 1842.—*From the Society.*

Transactions of the Mineralogical Society of St. Petersburg, vols. 1 and 2, 1831, 1842, with plates, octavo, (in Russian language.)—*From Charles Cramer.*

Estatutos del Atenco Cientifico, Literario y Artistico de Madrid, 1838.—Memoria Leida en el Atenco, &c., &c., 1839.—Lista de los Señores Socios, &c., &c., 1840.—Memoria Leida en el Atenco, &c., &c., 1840.—*From the Society.*

The Western Lancet, devoted to Medical and Surgical Sciences, edited by L. M. Lawson, M. D., Cincinnati, from May, 1842, to March, 1843, eleven numbers.—*From the Editor.*

American Quarterly Register, February, 1843, Boston.—*From the American Education Society.*

Inaugural Address of Hon. A. Gallatin, President of the New York Historical Society, 1843.—*From the Society.*

Account of the Total Eclipse of the Sun, Royal Astronomical Society, London, No. 25, vol. 5, 1842.—*From E. Everett, American Minister, London.*

Observations on Tenotomy, &c., as a remedy for Club-feet, &c., by S. B. Richardson, M. D.; Louisville, Kentucky, 1840.—*From the Author.*

Revista de España y del Estrangero Año 2, &c.—*From the Atenco, &c., &c., de Madrid.*

Description of Ancient Remains, Animal Mounds, and Embankments, in Grant County, Iowa, and Richland, Wisconsin, by Stephen Taylor, with plates.—*From the Author.*

The same.—*From Wm. R. Smith.*

History of Montpelier, Vermont, by Rev. John Gridley, 1843.—*From Col. Abert, in the name of E. P. Walton, Montpelier, Vermont.*

Catalogue of Terrestial and Fluviatile Shells of Ohio, by John G. Anthony.—*From the Author.*

Proceedings of the Academy of Natural Sciences, Philadelphia, vol. 1, Nos. 22 and 23, January and February, 1843.—*From the Academy.*

Literary Age, vol. 1, Nos. 11, 12, 13, 14; Philadelphia, 1843.—*From Reynell Coates, M. D., Editor.*

United States Literary Advertiser, &c.; New York, February, 1843, No. 18.—*From the Publishers.*

Royal Gazette, Bermuda, January 24 and 31, February 7, March 7, 1843.—*From Gov. Reid.*

Statistics of the District of Columbia, to December 31, 1840.—Description of the City of Washington, published in the National Intelligencer of the 25th of April, 1840.—*From John Sessford, Sen.*

Outlines of the Institutes of Medicine, founded on the Philosophy of the Human Economy in Health and in Disease, by Joseph A. Gallup, M. D., 2 vols., 8vo.; Boston, 1839.—*From the Author.*

Collections of the Massachusetts Historical Society, vol. 8, 3d series, 1843.—*From the Society.*

Abstract of Correspondence.

Letters—

To T. B. Livingston, U. S. Consul, Halifax, N. S., February 13, 1843: Sending duplicate letter, and informing him that a box of minerals of Nova Scotia, sent to the Secretary of State, supposed to be for the National Institute, would be presented to it in his name.

To A. H. Palmer, American and Foreign Agency, New York, April 6, 1842: Informing him that the firm of Masters, Markoe, & Co., were authorized to pay his bills of expenses against the Institute.

To John L. Stephens, author of Travels, &c., New York, April 6, 1843: Referring to passages in his travels in Yucatan respecting the Institute, transmitting duplicate letter of appointment, and expressing a hope that he will become an active corresponding member of the Institute.

To Hon. W. C. Preston, South Carolina, March 27, 1843.

To Thomas Sewall, M. D., Washington, March 14, 1843: Requesting him to take charge of, and to deliver, a number of letters, &c., &c., and to correspond with the Institute during his travels, &c.

To Samuel W. Woodhouse, Philadelphia, March 8, 1843: Enclosing copy of a vote of thanks of the Institute.

Letters and Communications.

From Professor Link, Director of the Society for Promotion of Horticulture in the Prussian States, Berlin, February 27, 1843: Transmitting transactions and list of members of the Horticultural Society, from the Society.

From C. Tcheffkine, Major General Russian Mining Engineers, St. Petersburg, July 31, 1842: Enumerating the volumes formerly sent by him to the National Institute, and forwarding others, &c.

From the same, (to the Directors of the National Institute,) St. Petersburg, August, 1842: Transmitting certain volumes to the Institute.

From the Linnæan Society, by John J. Bennett, Secretary, London, November 10, 1842: Acknowledging with thanks receipt of first and second bulletins of the National Institute, &c.

From Don Pedro de Angelis, Buenos Ayres, November 16, 1842: Forwarding by Dr. Hassler, U. S. Navy, certain books for the Institute.

From H. W. Gilbert, Buenos Ayres, November 19, 1842: Forwarding by U. S. Ship Decatur a box of shells, &c., for the Institute.

From Sociedad Economica Gaditana de Amigos del Pais, Cadiz, November 30, 1842: Acknowledging letters, and transmitting formal acceptance of the correspondence of the Institute.

From Royal Society of Sciences, Gottingen, December 5, 1842, by J. F. L. Hansmann, Secretary: Presenting the thanks of the Society for various publications of the Institute.

From C. S. Todd, American Minister, St. Petersburg, December $\frac{15}{27}$, 1842: Acknowledging letter of October, and enclosing copies of letters addressed by him to Major General Tcheffkine and M. Ouvaroff, thanking them for presents from the Imperial Academy and the Corps of Mining Engineers, &c.

From the Institut Pedagogique Central, by Professor Andrés Smirnoff, Secretary, St. Petersburg, December $\frac{19}{31}$, 1842: Acknowledging first and second bulletins, &c., with thanks, &c.

From Lemuel Wells, U. S. Consul, St. Catharines, Brazil, December 26, 1842: Stating that he has shipped by Brig John Suders, Capt. Mason, New York, a box containing twenty-seven dozen birds, and five cases of insects of Brazil, to the collector of New York, and also to the care of Gilbert Hopkins, of same place.

From Theodore S. Fay, Secretary of Legation, Berlin, December 28, 1842.

From Wm. Vaughan, London, December 31, 1842: Presenting to the Institute several volumes, &c.

From Petty Vaughan, London, January 6, 1843.

From C. S. Todd, American Minister, St. Petersburg, January 11, 1843: Transmitting a communication from the Institut Pedagogique Central of St. Petersburg.

From T. W. Fox, U. S. Consul, Plymouth, England, January 11, 1843: Will send specimen of the rock of which the great breakwater of Plymouth sound is built, completely riddled by boring shells, &c.

From the same, January 13, 1843: Sending duplicate of former letter, and stating that he has shipped by packet Francis 1st, care of the Captain, New York, the box mentioned in it.

From Theodore S. Fay, Secretary of Legation, Berlin, January 23, 1843: Enclosing letter from M. Offers, of the Royal Museum, who has presented him with a second set of catalogues of the Museum, to supply the place of those which miscarried, &c.

From Henry Wheaton, American Minister, Berlin, January 25, 1843: Description of the canal which unites the river Mayn with the Danube, (with a plan.) Works of art in the Bavarian capital, (Munich.) Description of the Walhalla.

From John H. Blake, Boston, January 31, 1843: Acknowledging membership, &c., sending specimens of a new mineral discovered by him in the District of Tarapaca, Peru, named Pickeringite; also, a suite of specimens of native nitrate of soda, from the same place, and asking how presents and communications may be sent to the Institute.

From George S. Curson, Washington, January 31, 1843: Presenting a piece of antique sculpture, from Mexico.

From H. Wheaton, American Minister, Berlin, February 1, 1843: Character of Frederick the Great.

From A. Baker, U. S. Chargé d'Affaires, Turin, December 7, 1842: Stating that he has several valuable works for the Institute, and asking how he is to send them on.

From W. B. Hodgson, U. S. Consul, Tunis, Malta, May 12, 1842: Sending specimens of insects preserved for one hundred years between plates of mica, prepared by one of the knights of Malta, at the period when the public library of the order was founded, and an attempt made to establish a cabinet of natural history.

From General James Semple, late Chargé d'Affaires of the U. S. at Bogota, to Hon. John Reynolds, Member of Congress, Springfield, Illinois, February 10, 1843: Inquiring about the box of curiosities sent by him to the Institute, &c.

From H. A. S. Dearborn, Boston, February 10, 1843: Expressing gratification at the publication of his paper on the subject of an experimental farm and gardens, recommended to be established by Government at Washington.

From Hon. James Matthews, House of Representatives, February 12, 1843: Enclosing a letter from Dr. W. M. Awl, Superintendent of the Lunatic Asylum at Columbus, Ohio, acknowledging the medical

circular of the Institute, and sending copies of the annual reports of the Asylum for the Institute.

From Dr. James P. Screven, Savannah, Georgia, February 13, 13, 1843: Sending fossil molar teeth of megatherium, belonging to the Institute.

From John C. Brown, Custom House, Boston, February 13, 1843: As there are no vessels sailing from Boston to Washington at this season, he asks whether the box he wrote about in a former letter may not be sent by Harnden's express line.

From L. Warrington Sloat, Portsmouth, New Hampshire, February 14, 1843.

From E. H. Barton, New Orleans, February 14, 1843.

From James Hall, Geologist, New York, Albany, February 18, 1843: Acknowledging second bulletin. Will send to the Institute a collection of specimens. Encloses circular notice of the meeting of the Association of American Geologists and Naturalists at Albany. Will bring the subject of the next meeting at Washington before the Association.

From John C. Brown, Custom House, Boston, February 21, 1843: Acknowledging letter of the 16th, and forwarding a box from Smyrna, by Harden's express, &c.

From A. H. Palmer, American and Foreign Agency, New York, February 21, 1843: Enclosing bill of postages against the Institute, and referring to former expenses by Mr. Everett, in London; also, a letter to him from the Atenco Literario y Cientifico of Madrid, accepting correspondence of the Institute, stating that certain numbers of the first bulletins never reached him.

From F. Horner, M. D., Warrenton, Virginia, February 23, 1843: Acknowledging medical circular and replying to its interrogatories, &c.

From Hon. Levi Woodbury, U. S. Senate, to Mr. Force, February 23, 1843: Enclosing letter from Dr. C. T. Jackson, on the subject of the tin ores of New Hampshire, with an ingot of pure tin, extracted from them, and presented to the National Institute.

From Hon. Osmyn Baker, House of Representatives, February 25, 1843: Asking copies of publications of the Institute, especially those of its Medical Department, for a friend in Massachusetts, who will be useful to the Institute.

From Professor Lewis R. Gibbes, College, Charleston, South Carolina, February 21, 1843: Offering thanks for membership. Will forward soon a parcel of plants and a box of shells of South Carolina, acknowledging medical circular, and will place it in good hands, &c.

From W. Byrd Powell, Little Rock, Arkansas, to Col. Abert, February 25, 1843: Forwarding, in compliance with Mr. Williams' advice, a box containing one hundred and five mineralogical and geological specimens, with a catalogue and description of the country

enclosed in the box; also, a collection of plants and shells, and expressing a desire to exchange specimens with any member of the Institute.

From Henry L. Ellsworth, Patent Office, Washington, February 25, 1843.

From S. B. Buckley, New York, February 26, 1843: Describing a fossil animal in his possession, seventy feet long, from Alabama, which he offers for sale to the Institute, before shipping it to London.

From Samuel Webber, M. D., Charlestown, New Hampshire, February, 1843: Transmitting replies to circular of the Medical Department.

From G. W. Blagden, Boston, February 27, 1843.

From Hon. J. E. Holmes, House of Representatives, March 1, 1843.

From John Pickering, Boston, March 1, 1843: Has just received from Edinburg, 2 vols., octavo, transactions of the Royal Mineralogical Society of that city, and several pamphlets, for the Institute; and asks how they are to be forwarded.

From J. Woodhouse Stevens, Washington, March 3, 1843: Wishes to become a paying corresponding member, and encloses $5, first year's fee, &c., &c., &c.

From Robert Wilson, Franklin, Attakapas, Louisiana, March 5, 1843: Asking information respecting the Institute, and terms of membership. Wishes to make contributions. Inquires for seeds, plants, &c., for distribution, &c.

From A. H. Palmer, American and Foreign Agency, New York, March 6, 1843.

From the same, March 8, 1843: Receipt of a sum of money paid him for postages, and other expenses incurred by him for the Institute.

From Francis Markoe, New York, March 8, 1843: Transmitting receipt for moneys paid.

From John Lenthall, U. S. Naval Constructor, Philadelphia, March 9, 1843: Suggesting that a fine model steam engine in the Philadelphia Navy Yard, and quite useless there, might be sent to the Institute under the order of the Secretary of the Navy.

From Charles F. Wood, Washington, March 10, 1843: Resigning resident membership, &c.

From General James Semple, (late American Minister at Bogota,) Illinois, March 10, 1843: Transmitting duplicate of his letter of November 1, 1842, describing the contents of a box of minerals, &c., from South America, sent by him to the National Institute.

From A. H. Palmer, American and Foreign Agency, New York, March 10, 1843.

From W. B. Hodgson, Savannah, Georgia, March 11, 1843: Transmitting printed account by Dr. Habersham of fossil bones of Skiddaway river, Georgia, megalonyx, megatherium, &c., &c.

From John Pickering, Boston, March 13, 1843: Acknowledging letter, and forwarding certain books and packages, &c.

From John B. Murray, New York, March 18, 1843.

From Henry J. Rogers, Baltimore, March 18, 1843: Presenting lithograph of his American telegraph, accompanied by an explanation, and asking for the third bulletin, &c.

From William Schley, Baltimore, March, 1843: Accepting membership, and desiring to be enrolled among the paying correspondents, &c.

From John B. Murray, New York, March 25, 1843.

From Dr. E. Foreman, Baltimore, March 27, 1843: Calling attention to the enormous fossils discovered in Georgia, &c.

From J. G. Syz, Swiss Consul General, Philadelphia, March 27, 1843: Apprising Secretary that he has transmitted to Switzerland various letters and packages for the Institute.

From Lieuts. J. Bankhead Magruder, M. J. Burke, and S. Jones, First Artillery, United States Army, Hancock Barracks, Houlton, Maine, March 30, 1843: Announcing that they had forwarded several specimens of natural history, from the late disputed territory, now part of Maine.

From John A. Bryan, Second Assistant Postmaster General, March 3, 1843: Accepting resident membership, and enclosing $5 fee.

From Augustus A. Gould, Boston, April 1, 1843: Communicating report of births, deaths, and marriages in Massachusetts in 1842, in reply to the circular of the Medical Department.

From H. Wheaton, American Minister, Berlin, January 15, 1843: On the National Institute; state of the fine arts in Denmark; Karsten and Thorwaldsen.

The Hon. J. R. Ingersoll communicated, at the desire of Peter A. Browne, Esq., of Philadelphia, a manuscript essay, by the latter, entitled "Solid Meteors and Meteoric Stones," inscribed by the author to the National Institute; whereupon, it was

Resolved, That a committee of three persons, to be named by the Chair, be appointed to examine and report on the essay on solid meteors and meteoric stones, by P. A. Browne, Esq., of Philadelphia.

The following persons were appointed the committee: Mr. Nicollet, Col. Abert, and Dr. Pickering.

Lieut. J. M. Gilliss announced the following communication, which was referred to the Committee on Exchanges.

"*January* 11, 1842.—Professor Edward Poeppig, Director of the Zoological Museum of the University at Leipsic, wishes to enter into correspondence with the Exchange Committee of the National Institute, Washington."

On motion of the Hon. J. Q. Adams, it was

Resolved, That the Committee on Exchanges be appointed by the Chair.

And the following persons were appointed accordingly: Mr. Markoe, Col. J. J. Abert, and Mr. Dayton.

On motion of the Hon. J. Q. Adams, it was

Resolved, That the standing committees be re-appointed at the annual election.

The Hon. J. Q. Adams presented to the Institute, in the name of Dr. J. G. Flügel, U. S. Consul, Leipsic, an allegorical napkin of double damask silk, manufactured by Ernest Schiffner, of New Schönder, in Saxony, accompanied by a description of the allegories, and specimens of silk stuffs manufactured at Annaberg, in Saxony, of silk produced in the cocooneries at Leipsic and Dresden.

The Hon. John Q. Adams offered the following resolution, which was adopted:

Resolved, That a committee of three be appointed by the Chair, to examine and report upon the specimens of silk presented to the Institute this evening by Mr. Adams, in the name of Dr. J. G. Flügel, U. S. Consul at Leipsic; and the allegorical napkin, accompanied by a description, presented by the same in the name of Ernest Schiffner, of New Schönder, in Saxony, and Dr. J. G. Flügel.

Resolved, That the thanks of the Institute be presented to Dr. Flügel, and to Mr. Schiffner, for these donations.

And Mr. Adams, Mr. H. L. Ellsworth, and Mr. Fitzgerald, were appointed.

Stated Meeting, May 8, 1843.

The following contributions and deposites were announced:

For the Cabinet.

Charred Wheat, taken on the banks of the Hudson, in the town of Red-Hook, from the ruins of a grain store, burned by the British in the Revolutionary War, when they ascended that river and burned Kingston.—*From Robert Benner, Red-Hook.*

Specimens of Belemnites, from Winchester, North Carolina.—*From Thaddeus D. Love.*

An Indian Stone Axe.—*From E. W. Hansell.*

One Cream Nut Pod; one specimen of Palmapedia cheraria; one head of Lagostomus tridactylus; three specimens of Muscicapa savanna; Seeds, &c., from Buenos Ayres; one Fish Skin, from the Rio de la Plata; Ibis falcinellus, from Rio de la Plata; Fulica, from Rio de la Plata; Strix cunicularia, from Buenos Ayres; Tyrannus sulphuratus, from Buenos Ayres; Turdus, from Buenos Ayres; Sturnus, from Buenos Ayres; Muscicapa, from Buenos Ayres;

Two Bottles and one Canister, containing Reptiles, from Buenos Ayres.—*From C. A. Hassler, Surgeon U. S. Navy.*

One Fancy Basket made of Paper.—*From Richard Ashton.*

Fossil Shell, from near Upper Marlborough, Maryland.—*From C. C. Parker.*

Salt, from the plains of the Arkansas River.—*From Lieut. Eustis.*

Marble Basin, from the Capitol.—*From Major Noland.*

Indian Saddle.—*From R. W. Bates.*

Palate of a Fish, from a marl-pit in Talbot County, Maryland.—*From William Kirby.*

The following Curiosities and Shells.—*From John Cassin, Philadelphia.*

Kroo-men's provisions for a journey, *West Africa.*
Chief's War Cap, made of the skin of a fish, *West Africa.*
Lady's dress, of matting, *West Africa.*
Kroo's medicine chest, *West Africa.*
Kings' sceptre, made of an Elephant's tail, *West Africa.*
Grie-Grie, or Gregory, a charm or amulet, *West Africa.*
Skin of a large Boa Constrictor, *West Africa.*

2 Voluta proboscidalis,	*West Africa.*	5 Oliva,	*West Africa.*
2 Achatina perdix,	"	3 Terebra strigillata,	"
1 Voluta neptuni,	"	1 Cardium costatum,	"
2 " porcina,	"	2 Cyprea stercoraria,	"
1 Pholas,	"	1 Lucina spheroides,	"
2 Cytherea prostata, ?	"	2 Cardium ringens,	"
1 Cardita,	"	1 Cytherea,	"
1 Purpurea coronata,	"	2 Murex saxitilis,	"
1 Cytherea, ?	"	2 Bulimus turbinatus,	"
2 Donax cuneata,	"	1 Cyprea rattus,	"
1 Tellina,	"	1 Murex cornutus,	"
2 Oliva julieta,	"	2 Cyprea stercoraria,	"
2 Cytherea corbicula,	"	1 Murex,	"
2 Natica,	"	46 specimens.	

Box, containing suite of Geological specimens, Minerals, Plants, &c., &c., of Arkansas.—*From W. Byrd Powell.*

Ball of Hair, from the Stomach of an Ox, Attakapas, Louisiana.—*From Andrew C. Armstrong.*

Three Bags of Seed Beans, of Chile, for distribution, from M. Carvallo, of Chile.—*From James H. Causten.*

Two Boxes, containing one hundred and fifty-six specimens of Humming Birds; one hundred and forty-three specimens of various genera Birds; five cases, containing about four thousand specimens of Insects; two Bats: all of Brazil.—*From Lemuel Wells, U. S. Consul, St. Catherine, Brazil.*

Two Glass Jars, containing Marine Animals, taken at sea in thirty-two fathoms water, lat. 39° 57′, long. 72° 48′, by Captain Thos. Gedney, U. S. Navy.—*From Capt. Gedney.*

Box, containing a collection of Land and Fresh Water Shells of the Valley of the Ohio, presented by O. Mussey.—*From Dr. R. D. Mussey.*

CATALOGUE OF OHIO VALLEY SHELLS.

Helix tridentata,
" pennsylvanica,
" perspectiva,
" zaleata,
" clausa,
" concava,
" solitaria,
" profunda,
" hirsuta,
" inornata,
" alleviata,
" multilineata,
" thyroidæa,
" albolabrus,
" follax,
" fuliginosus,
" ligera,
Cyclas similis,
Phrysa elliptica,
"
Melania,
" cornica,
" exilis,
" canaliculata,
" depygris,
" subcarinati,
Cyclostoma lapidaria,
Succinea amphibea,
Planorbis bicarinati,
" trivolvis,
Poludina,
" ponderosa,
" integra,
Lynania desinosa,
Lynania humilis,
Pupa armifera,
Volvata tricarinati,
Anculosus costatus,
" cincinnatiensis,
" præorsus,
Alasmadonta complanata,
" rugosa,
Aanadonta edentata,
" plana,
" tennissimus,
" ferrsaciana,
" terbicillis,
Anadonta,
Unio trigonis,
" sulcatus,
" foliatus,
" elegans,
" undulatus,
" rectus,
" lachrymosus,
" tuberculatus,
" gibbosus,
" tenuissimus,
" allatus,
" pyramidatus,
" abruptus,
" triangularis,
" luteola,
" subovatus,
" ventricosus, (male of the ovatus,)
" occidens,
" plicatus,
" cylindricus,
" leavisisima,
" circulus,
" liburnus,
" ellipsis,
" plicatus,
" pustulatus,
" foliatus,
" cornutus,
" zigzag,
" redibundus,
" elegans,
" perplexus,
" capillus,
" occidens,
" cuneatus,
" tuberculatus,
" ovatus,
" securis,
" crassus,
" trochilus,
" varicosus,
" torsus,
" pustulatus,
" undatus,
" meteneorus.

For the Library.

Hoinehonua Pale, (book in Sandwich Island language.)—Elements of the Pathology of the Human Mind.—Geological Description of the United States, by John Mitchell, 1816.—*From Charles A. Hassler, Surgeon U. S. Navy.*

Tenth Annual Report of the State Lunatic Hospital, at Worcester, Massachusetts, December, 1842.—First Annual Report of the Secretary of the Commonwealth.—Registry and Returns of Births, Marriages and Deaths in Massachusetts, February, 1843.—Sixth

Annual Report of Board of Education, &c., Boston, 1843.—Abstract of Returns, from the Jails, Towns and Houses of Correction, in Massachusetts, concerning the condition of Pauper Idiots and Lunatics, in Almshouses, Jails, &c., &c., in 1842.—*From J. A. Bolles, Secretary of the Commonwealth of Massachusetts.*

Transactions of the American Philosophical Society, vol. viii, part 3; Philadelphia, 1843.—Proceedings of the same, vol. 2, No. 25, January, February, and March, 1843.—*From the Society.*

Resumen de la Geografia de Venezuela, par Augustin Codazzi; Paris, October, 1841.—*From General J. A. Paez, ex-President of Venezuela.*

Memoires de la Societé Royale des Antiquaires du Nord, 1836, 1837, Copenhagen.—The same, for 1838 and 1839.—Guide to Northern Archæology, 1837, published by the Society.—*From the Royal Society of Northern Antiquarians, by C. F. Rafn, Secretary.*

Medical Society of the County of Franklin, Massachusetts, by Stephen W. Williams, M. D., &c., &c., May 25, 1842.—*From the Author.*

Coleccion de Obras y Documentos relativos a la Historia Antiqua y Moderna de las Provincias del Rio de la Plata, illustrados con Notas y Disertaciones por Pedro de Angelis, 6 vols., 4to.—Recoplacion de las Leyes y Decretos, &c., &c., from 1810 to 1840, by the same, 3 vols., octavo.—Indice General to the same, by the same, 1 vol., octavo; Buenos Ayres.—Declaracion de un Punto de Liturgia Eclesiastica; Buenos Ayres, 1831, by the same.—Biografia de Señor General Arenales, &c., by the same, 1832.—Documentos Officiales, &c., &c., sobre las Yslas; Malvina, 1832, by the same.—Appendice a los Documentos, &c., by the same.—Memoria sobre el Estado de la Hacienda Publica, by the same, 1834.—De la Conducta de los Agentes de la Francia durante el Bloqueo, &c., &c., by the same, 1829.—Historical Sketch of Pepy's Island, &c., &c., by the same; Buenos Ayres, 1842.—*From the Author.*

Catalogues of the Royal Collections of the Museum, &c., &c., of Berlin, 1834 to 1841, 6 vols.—*From M. Olfers, Director, by the hands of Theodore S. Fay, Secretary of Legation, Berlin.*

Fifty-Sixth Annual Report of the Regents of the University of the State of New York, March 1, 1843.—*From the Regents.*

Meteorology, &c., by Samuel Torrey, M. D.—*From the Author.*

Memorial to the Legislature of Massachusetts respecting Criminals, Paupers, Insane, &c., &c., by D. L. Dix, 1843.—Fifth printed Report of the Auditors of the Town of Dorchester, &c., from February, 1842, to February, 1843.—Insanity in Massachusetts, by S. G. Howe; Boston, 1843.—*From Edward Jarvis.*

Plan of the Walhalla, with a description.—*From H. Wheaton, American Minister, Berlin.*

Royal Gazette, Bermuda, from March 21 to April 18, 1843; five papers, containing Meteorological Tables.—*From Governor Reid, Bermuda.*

Berliner Gewerbe, Industrie und Handelsblatt, from July 2, 1842, to February 4, 1843, sixty-eight numbers.—*From H. Wheaton, American Minister, Berlin.*

Transactions of the Society of Alumni of the College of Physicians and Surgeons of the University of the State of New York, No. 1. —*From the Society.*

Notice of the Discovery of a new Locality of the Infusorial Stratum, in Virginia, by M. Tuomey.—*From the Author.*

Reply of Col. Abert and Mr. Markoe to the Hon. Mr. Tappan, United States Senate, April, 1843.—*From Col. Abert and Mr. Markoe.*

Abstract of Correspondence.

Letters—

To John Cassin, Philadelphia, May 6, 1843: Thanking him for the valuable donations made to the Institute, through Mr. Townsend, &c.

To J. A. Bolles, Secretary of State of Massachusetts, April 12, 1843: Thanking him for the public documents sent through the Secretary of the Treasury.

From W. Byrd Powell, Arkansas, April 19, 1843.

From R. Dunglison, M. D., Secretary of Philosophical Society of Philadelphia, April 24, 1843: Thanking the Society for transactons, &c.

From Dr. J. G. Flügel, U. S. Consul, Leipsic, April 26, 1843: Informing him of the steps taken by the Institute upon the presentation, by Hon. Mr. Adams, of certain donations, and transmitting thanks, &c.

Letters and Communications.

From General José A. Paez, ex-President, Venezuela, Caraccas, August 10, 1843: Transmitting copy of Col. Codazzi's work on the geography of Venezuela, &c.

From Redmond Conyngham, Paradise, Lancaster County, Pennsylvania, November 26, 1843: Respecting Mr. Spencer's first circular, calling a meeting of learned men at Washington.

From John Bursotti, Naples, December 8, 1843: Transmitting eight livraisons of his work entitled "Bibliotheque de Commerce."

From C. C. Rafn, Secretary Royal Society of Northern Antiquarians, Copenhagen, December 8, 1843: Acknowledging receipt of bulletins, and forwarding certain memoirs of the Royal Society, &c.

From the Leopold Caroline Academy of Naturforcher, Breslau, January 6, 1843: Acknowledging, with thanks, receipt of first and second bulletins.

From John S. Enys, near Falmouth, England, March 11, 1843:

Referring to a former letter, and will be happy to communicate information in regard to the conduct and working of the Cornish mines, &c.

From George Templeman, (to Col. Talcott,) Washington, March 20, 1843: Offering the Institute a complete set of public documents at half price.

From Andrew C. Armstrong, Franklin, Attakapas, Louisiana, January 13, 1843.

From Robert Walsh, Paris, March 14, 1843: Asking for a copy of Congress library catalogue for Mr. Barbier, of the Royal library; also, that of the Institute. Hopes soon to see third bulletin, &c.

From Count Castelneau, Paris, March 20, 1843: Referring to former letters, and stating that he is about to embark for South America on a scientific journey for the French Government, &c.

From Franklin Litchfield, Consul, Puerto Cabello, March 23, 1843: Acknowledging receipt of Col. Codazzi's letter of appointment, &c.

From John L. Stephens, New York, April 10, 1843.

From W. B. Hodgson, Savannah, April 11, 1843: Stating that Dr. Habersham is preparing a scientific account of the fossil megatherium, for the Institute.

From the same, April 12, 1843: Respecting his previous letter from Malta. Dr. Habersham will forward more of the megatherium bones, &c.

From Benjamin Silliman, New Haven, April 12, 1843: Will publish Mr. Spencer's circular in the July number of his journal; also, the medical circular, &c.

From Peter A. Browne, Philadelphia, April 12, 1843.

From James H. Causten, Washington, April 15, 1843: Placing at the disposal of the Institute, for distribution, three bags of seed beans of Chile, from Manuel Carvallo, of St. Iago de Chile.

From Osgood Mussey, Washington, April 15, 1843.

From William Prescott, Lynn, Massachusetts, April 15, 1843: Applauding the objects of the Institute, and promising to forward a suite of shells of Massachusetts; proposing exchanges, &c.

From A. H. Palmer, American and Foreign Agency, New York, April 22, 1843: Forwarding a package from Venezuela, aud charging the Institute with certain expenses, &c.

From the same, April 17, 1843: Transmitting letter from General Paez, ex-President of Venezuela; also, a package from the Royal Society of Northern Antiquarians, of Copenhagen, &c.

From Mr. Hopkins, New York, April 21, 1843: Enclosing transportation receipt for two boxes, containing insects and birds, from Lemuel Wells, U. S. Consul at St. Catharine, Brazil.

From W. Govan Howard, Baltimore County, April 24, 1843.

From Dr. Stephen W. Williams, Deerfield, Massachusetts, April 24, 1843: Acknowledging membership, bulletins and medical circu-

lar. Will contribute to so useful an Institution. Has forwarded his address before the Massachusetts Medical Society, and will forward other works, &c., &c., &c.

From P. A. Browne, Philadelphia, April 29, 1843: Offering a present of prepared specimens of fishes, from St. Croix, West Indies, and asking for Mr. Spencer's second circular, &c.

From A. H. Palmer, New York, May 4, 1843: Enclosing letter from Count Woronsoff, Governor of South Russia, acknowledging membership and the bulletins, and expressing a warm desire to promote the objects of the Institute.

From John K. Townsend, Washington, May 4, 1843: Enclosing a letter to him from John Cassin, of Philadelphia, enumerating various articles from Africa, which he presents to the Institute. Stating, also, that Dr. Edwin Fussell, of Ohio, has presented a collection of fossils of that State; all which have been received and deposited in the hall of the Institute.

From W. J. Stone, Treasurer, Washington, May 6, 1843: Resigning his office.

Col. Abert informed the meeting that the Hon. Mr. Porter, Secretary of War, was willing to act as a Director of the Institute.

Mr. George W. Riggs, Jr., was elected Treasurer of the National Institute.

On motion of Rev. Mr. Bulfinch, it was

Resolved, That a committee of three be appointed by the Chair to inquire into the expediency of resuming the monthly conversation meetings of the Institute, and of adopting such measures as may secure the presentation of communications on scientific subjects at such meetings by the resident members.

Mr. Bulfinch, Lieut. Gilliss, and Mr. Dayton, were appointed the committee.

Capt. George W. Hughes addressed the meeting on the subject of the ravages of the worms on the stone of which the breakwater at Plymouth, England, is constructed.

Stated Meeting, June 12, 1843.

The Corresponding Secretary announced the following contributions and deposites.

For the Cabinet.

Belone, or Silver Gar, taken at the mouth of the Eastern Branch, D. C.—*From George Sweeny.*

Two specimens of Coral; Mosaic Pavement.—*From James G. Coombs.*

Singular growth of Potato.—*From John Hodgskiss.*

Part of a Rattlesnake's Skin.—*From Mr. Martin, New York.*

Three Large Frogs; Several Snakes.—*From some Boys.*

Whidah Finch, (Fringilla Whidah,) of Africa.—*From Lewis Zantzinger.*

Anthracite, from the coal mines of Pottsville, Pennsylvania; Piece of Chinese Money.—*From R. Bright.*

Box of Minerals, &c., from Cornwall, sent to the Secretary of State, from R. S. Fox, U. S. Consul at Falmouth.—*From Hon. H. S. Legare, Secretary of State.*

Barrel containing large specimens of Quartz and Beryl Crystals.—*From Rev. Benjamin Hale, Geneva, New York.*

Box of Shells, and package of Plants, of South Carolina, (with a list.)—*From Dr. Lewis R. Gibbes, Charleston.*

Box containing Preserved Fishes, from the Island of St. Croix, West Indies.—*From Peter A. Browne, Philadelphia.*

Medals—two series; the first embracing the British Sovereigns from William the Conqueror to Queen Victoria; the second, those of France from Pharamond to Louis Phillippe; electrotyped by Professor Wyatt.—*From a club of members.*

Crab Moth, and another insect, (believed to be rare.)—*From Col. Totten, in the name of Mr. George E. Chase.*

Box of Nova Scotia Minerals.—*From T. B. Livingston, U. S. Consul, Halifax, Nova Scotia.*

Box containing specimen of Primitive Limestone Rock, in the centre of which is a singular impression, discovered in Merion Townships, Chester County, Pennsylvania.—*From Peter A. Browne.*

Box containing a collection of Plants of the Northwest Territory of the United States, collected by J. N. Nicollet, labelled and described by Mr. Torrey, of New York.

For the Library.

Saggio della Semiografia dei Volumi Ercolanesi, pel Cav. Lorenzo Blanco, Alumno Interpetre, nella Reale Officina de' Paperi, Napoli, 1842, octavo.—*From the Author.*

A Practical Treatise on Bilious Remittent Fever, its Causes and Effects, with illustrative Tables and Cases, on the Temperature of the System in the Febrile Diseases of Jamaica, to which is added Medical Topography of the different Military Stations, &c., &c., by Wm. Arnold, M. D.; London, 1840, octavo.

Inaugural Address of Dr. Wm. Arnold, President of the Literary and Philosophical Society of Jamaica.—*From the Author.*

Hitchcock's Final Report on the Geology of Massachussetts, 2 vols., quarto, 1841.—Agricultural and Scientific Report of the State of Massachusetts, five vols.—*From Hon. John A. Bolles, Secretary of the Commonwealth, in the name of the State.*

American Quarterly Register, conducted by Rev. S. H. Riddel, Boston, May, 1842.—*From the American Education Society.*

Institut Royal de France, 1841.—Programme of Communications made to the American Philosophical Society, at its 100th Anniversary, 26th May, 1843.—*From Mr. Duponceau, President of the Society.*

Profile of Rocks between Philadelphia and Norristown.—Deposition of Thomas Mervine. (Both these documents are in illustration of the rock containing singular marks, presented by P. A. Browne, of Philadelphia.)—*From P. A. Browne.*

Flora Fluminensis, seu Descriptionum Plantarum Præfectura Fluminensi Sponte Nascentium, containing 1640 designs of Plants, by Fr. Josephus Marianus, a Conceptione Velloso, 11 vols., folio, and an Index, lithographed and published by the Brazilian Government in Paris, 1837.—*From the Chev. G. de Lisboa, Minister Brazil, in the name of the Government of Brazil.*

Biblioteca di Commercio, compilata per cura di G. Bursotti, 7 vols. octavo, October, 1841, to April, 1842, and July, 1842.—*From the Author.*

Description of the ten Javan Deities in the New York Museum, by I. Cozzens, 1830.—Researches on the Cheiroptera of the United States, by Wm. Cooper; New York, 1837.—Geological History of New York Island, with a Map, &c., &c.; New York, 1843; by Issachar Cozzens.—*From Mr. Cozzens.*

Annales de l'Observatoire Royal de Bruxelles, par A. Quetelet, Perpetual Secretary, Tome II, 1842.—*From M. Quetelet, in behalf of the Royal Observatory.*

Paper Money on a Sheet.—*From*

Atlas Fisico e Politico de la Republica de Venezuela, par Augustin Codazzi, Colonel de Ingenieros; Carracas, 1841.—*From His Excellency General Jose Antonio Paez, late President of the Republic of Venezuela.*

Antichi Monumenti di Siracusa, illustrati dell' Antiquario Guisseppe Maria Capodieci; Syracuse, 1816, 2 vols., octavo.—*From Capt. John S. Chauncey, U. S. Navy.*

Royal Gazette of Bermuda, April 25, May 2, 9, 1843, (with Meteorological Tables.)—*From Gov. Reid, of Bermuda.*

Proceedings of the Academy of Natural Sciences of Philadelphia, March and April, 1843, Nos. 24, 25.—*From the Academy.*

Appleton's Literary Bulletin, New York, June, 1843.—*From the Editors.*

U. S. Gazette, Philadelphia, May 29, 1842, containing letter from S. C. Walker and E. Otis Kendall, of High School Observatory, to the Philosophical Society, on the late Comet.—*From the Authors.*

Sentinel and Witness, Middleton, Connecticut, May 31, 1843.—Plan for restoring Salmon to the Connecticut River, by J. Barratt, M.

D., President of Cuvierian Society of Wesleyan University.—*From Dr. Barratt.*

Philadelphia Gazette, 20th May, 1843, containing remarks on the Recent Comet, by S. C. Walker.—*From Mr. Walker.*

Memoire sur le Systéme Grammatical des Langues de quelques Nations Indiennes de l'Amerique du Nord; Paris, 1838, octavo; by P. S. Duponceau, of Philadelphia.—*From the Author, by the hands of Mr. Nicollet.*

Abstract of Correspondence.

Letters—

To J. G. Flügel, U. S. Consul, Leipsic, May 11, 1843: Communicating copy of certain resolutions passed by the Institute, &c.

To Professor E. Hitchcock, Amherst, Massachussetts, May 16, 1843: Making inquiries about the zygodon, by request of Mr. Hodgson, &c.

To George Gibbs, New York, May 16, 1843: Making inquiries about the zygodon, for Mr. Hodgson.

To W. B. Hodgson, Savannah, May 20, 1843: Respecting the zygodon, &c., &c., &c.

Letters and Communications.

From A. Hammett, U. S. Consul, Naples, September 25, 1842: Respecting the way in which letters, &c., may be sent to him.

From Chev. Lorenzo Blanco, (in Latin,) Naples, October 8, 1842: Expressing satisfaction at the reception of his work on the Herculanean MSS., and sending another work of his on the punctuation used by the ancients, &c.

From C. F. Rafn, Secretary of the Royal Society of Northern Antiquarians, Copenhagen, November 19, 1842: Congratulates the Institute, &c., and will forward the publications of the Royal Society, especially those which relate to the early history of America.

From R. W. Fox, U. S. Consul, Falmouth, January 30, 1843, (to Secretary of State:) With a box of choice mineralogical specimens from Cornwall.

From C. S. Todd, American Minister, St. Petersburg, March $\frac{8}{20}$, 1843: Stating that he has received from M. Pierre Chicacheff, of the Russian Mining Corps, a map of Russia in Europe, and an essay on the geology of Italy, for the Institute.

From Dr. J. C. Habersham, Savannah, April 13, 1843: Acknowledging letter and bulletins; commending the objects of the Institute, and speaking of the Georgia fossils, &c.

From John P. Brown, Dragoman, Chargé, &c., at Constantinople, April 12, 1843: Has forwarded to the Collector at Boston a box

for the Institute, containing Turkish weapons and other things, of which he encloses a list; is collecting coins, &c.

From Col. J. B. Murray, (of New York,) London, April 17, 1843: Saying that Mr. Railton, architect of the Nelson monument, has presented to the Institute a miniature model in marble of that work, which he will bring over with him in June.

From R. M. Harrison, U. S. Consul, Jamaica, April 25, 1843: Transmitting two works, from their author, Dr. William Arnold, President of the Literary and Philosophical Society of Jamaica, whom he recommends as a corresponding member; and sending description of certain paintings of value, offered to the Institute cheap, &c.

From Rev. Benjamin Hale, (of Geneva, New York,) Newburyport, Massachussetts, April 26, 1843.

From T. A. Conrad, Tampa Bay, May 7, 1843: Has several boxes of specimens ready for the Institute, and will hand in a catalogue of shells, and a paper on the subject of his observations, when he returns.

From Lewis R. Gibbes, M. D., Charleston, S. C., May 8, 1843: Has put up and shipped a collection of shells and plants of Carolina, for the Institute, of which he encloses a catalogue, &c.

From A. H. Palmer, American and Foreign Agency, New York, May 9, 1843: Acknowledging letters, and stating that he is assured by the Rev. Mr. Kincaid, American Missionary at Burmah, that His Royal Highness Prince Mekhara, is disposed to be friendly to the Institute, and whom he therefore recommends as a corresponding member.

W. B. Hodgson, Savannah, May 10, 1843: Requesting Secretary to ascertain whether the gigantic fossil zygodon can be bought for $200, and if so he will present it to the Institute.

From J. K. Townsend, Washington, May 10, 1843: Describing the contents of two boxes of birds and insects, presented to the Institute by Lemuel Welles, U. S. Consul at St. Catharine, Brazil.

From P. A. Browne, Philadelphia, May 10, 1843: Forwarding a box.

From George Cox, Postmaster, Huntsville, Alabama, May 10, 1843: Asking for some of the Chile beans, advertised in the papers as deposited in the Institute for distribution.

From J. H. Causten, Jr., Washington, May 13, 1843.

From T. B. Livingston, U. S. Consul, Halifax, May 13, 1843: Acknowledging letter and bulletins, &c.; is preparing a pair of Nova Scotia Loons for the Institute.

From O. de A. Santangelo, Philadelphia, May 14, 1843.

From Edward Kavanagh, Governor of Maine, Damariscotta Mills, May 15, 1843: Acknowledging circular inviting a meeting in April, 1844, and has sent it to be published, with an introduction by himself, in the Portland Eastern Argus, &c.

From P. A. Browne, Philadelphia, May 15, 1843.

From Lieut. Cadwalader Ringgold, U. S. Navy, Baltimore, May, 16, 1843.

From George Gibbs, New York, May 17, 1843: Answering letter respecting the zygodon, and stating that that valuable fossil was bought for the State collection at Albany.

From J. G. Syz, Consul General of Switzerland, Philadelphia, May 17, 1843.

From J. A. Bolles, Secretary of the Commonwealth of Massachussetts, Washington, May 18, 1843: Has deposited seven volumes scientific, agricultural, and geological reports of Massachussetts, which he brought on for the Institute.

From B. Ogle Tayloe, Washington, May 18, 1843: Stating that two series of rare medals of French and English sovereigns, from William the Conqueror and Pharamond to Queen Victoria and Louis Philippe, electrotyped by Professor Wyatt, have been purchased by a club of members, and presented to the Institute.

From M. Velasquez de la Cadena, New York, May 20, 1843.

From Samuel W. Woodhouse, Brandywine, Chester County, Pennsylvania, May 21, 1843.

From Dr. J. C. Habersham, Savannah, May 22, 1843: Acknowledging letter and expressing hope that Dr. Foreman, of Baltimore, will unite with him in presenting the whole collection of the fossil bones of the megatherium, &c., of Georgia, to the Institute.

From W. B. Hodgson, Savannah, May 23, 1843: Enclosing letter from Dr. Habersham to Dr. Foreman, respecting the megatherium fossils, now in Baltimore.

From Charles Baldwin, New Haven, Connecticut, May 23, 1843: Suggesting a plan for the restoration of national exchanges, &c.

From W. B. Hodgson, Savannah, May 24, 1843: Respecting the zygodon.

From A. Thomas Smith, acting Secretary of the Navy, May 26, 1843: Acknowledging letter, enclosing Mr. Upshur's circular, and stating that the box for the Institute lying at the navy yard would be delivered.

From P. A. Browne, Philadelphia, May 27, 1843: Describing singular marks discovered in the centre of a solid rock of primitive limestone, in 1830, in Montgomery County, Pennsylvania, which rock, if acceptable to the Institute, he will present.

From Lieut. S. Jones, U. S. A., Hancock Barracks, May 28, 1843.

From H. H. Sylvester, Washington, May 29, 1843.

From J. Dunlap, (assignee of Judah Dobson,) Philadelphia, May, 1842: Enclosing bill against the Institute for books, amounting to twenty-one dollars.

From J. T. Sharpless, M. D., Philadelphia, June 1, 1843.

From Jacob Porter, Plainfield, Massachussetts, June 1, 1843:

Referring to various works presented by him to the Institute, and asking for a copy of third bulletin.

From P. S. Duponceau, Philadelphia, June 5, 1843: Acknowledging letters, &c., and enclosing programme of papers, &c., read before the hundredth anniversary meeting of the American Philosophical Society; also a copy of the Royal Institute of France, for 1841.

From Col. J. G. Totten, Washington, June 7, 1843.

From P. A. Browne, Philadelphia, June 7, 1843: Enclosing railroad receipt for the box containing the specimen of rock referred to in a former letter, and a deposition respecting it by Mr. Mervine, and a geological profile of the formation of rock between Philadelphia and Norristown, in which the specimen was discovered.

From Chev. G. de Lisboa, Minister of Brazil, to the President of the Institute, Washington, June 8, 1843: Presenting to the Institute, in the name of the Government of Brazil, a copy of the Flora Fluminensis, published by that Government, in eleven folio volumes, and index.

From Henry Wheaton, American Minister, Berlin, April 26, 1843: On the errors of Dr. Robinson's account of the last days of the Emperor Charles V.

From William Anderson, Washington, June 12, 1843: Enclosing copy of a charge delivered by his father, Judge Anderson, to the grand jury of the district of Hamilton, in the territory south of the Ohio, at the October term, 1794.

The letter of the Chev. de Lisboa accompanying the Flora Fluminensis, presented to the Institute, and the letter in reply, were read.

Whereupon the Corresponding Secretary offered the following resolutions, which were adopted:

Resolved, That the Chevalier G. de Lisboa, Minister of Brazil, near the Government of the United States, be requested to convey to the Government of Brazil the thanks of the National Institute, for the splendid work called the Flora Fluminensis, presented by it to the Institute.

Resolved, That the thanks of the Institute be presented to the Chevalier de Lisboa, for the polite manner in which he has executed the wishes of his Government in this regard, and for the friendly terms in which those wishes have been communicated by him.

Mr. Nicollet addressed the meeting at length on the subject of the valuable work presented to the Institute by the Government of Brazil, and moved, "That the work, and the resolutions just passed on the subject, be referred, for examination and report, to a special committee of three persons, to be appointed by the Chair;" which was carried.

And Mr. Nicollet, Dr. Pickering, and Mr. Rich, were appointed.

Stated Meeting, July 10, 1843.

The Corresponding Secretary announced the following contributions and deposites:

For the Cabinet.

Duck with three Legs, one of which has four Toes.—*From Jonathan B. Jones.*

Small African Monkey, (*Simia,*) living.—*From Richard S. Poor.*

Pair of Ladies' Mitts, (domestic.)—*From Miss S. Simmons, Frederick City, Maryland.*

Butterfly; small Egg, laid by a full grown Hen in Washington City.—*From James McClegett.*

Eleven pieces of Copper Coin.—*From Henry Polkinhorn.*

One specimen of Carduelis communis, (Goldfinch,) from Europe.—*From Dr. A. McWilliams.*

Bust of the Hon. John C. Spencer.—*From Col. J. J. Abert.*

The Corresponding Secretary read a paper by Lieut. M. F. Maury, U. S. Navy, proposing a plan for collecting information for the purposes of navigation, by means of blank charts furnished to all vessels.

Mr. Nicollet, from the committee appointed to examine and report upon the essay on solid meteors and meteoric stones, by P. A. Browne, Esq., of Philadelphia, made a report, which was read to the Institute.

Dr. Pickering, from the committee appointed to examine and report upon the Flora Fluminensis, presented to the Institute by the Government of Brazil, and the resolutions passed upon the subject at the last meeting, made a report.

The Corresponding Secretary read a letter received from the Rev. F. Wayland, President of Brown University, Providence, Rhode Island, requesting a series of duplicates from the collections brought home by the Exploring Expedition. President Wayland had also written to the President of the United States, to the Hon. Mr. Upshur, and the Hon. Mr. Spencer, on the same subject, whose letters were referred to the Secretary, to be answered.

Stated Meeting, October 9, 1843.

The Corresponding Secretary announced the following contributions and deposites:

For the Cabinet.

A Box, containing specimen of the Rock of which the Plymouth Breakwater is built, perforated by Shell-Fish.—*From T. W. Fox, United States Consul, Plymouth, England.*

A Box of Copper Ores, from a new Mine in Jamaica, West Indies.—*From Robt. M. Harrison, American Consul, Kingston, Jamaica.*

A Box of Copper Ores of Cobre, Cuba.—*From Michael Mahon, United States Consul, St. Iago de Cuba.*

Selenite, a specimen from Grand River.—*From Thomas C. Sheldon, Detroit.*

Silver Coin of Philip V of Spain, 1724.—*From William Anderson.*

Box of Locusts, (*Cicada septemdecim.*)—*From Dr. Robert E. Peyton, Fauquier County, Virginia.*

Coin, George III, Virginia, 1773.—*From John Carroll Walsh, Baltimore County, Maryland, by the hands of the Hon. Secretary of State.*

A Cask and Box, from Forts Wayne and Scott, containing the following specimens.—*From Lieut. W. Eustis, United States Dragoons.*

2 Trigonocephalus contortix, *Copper-head Snake.*
1 Crotalus durissus, *Rattle Snake.*
1 Coluber, *Bull Snake.*
1 " *Jointed Snake.*
3 " of different species.
1 Bottle of scorpions, 1 Gryllotalpa americana, *Mole Cricket*, 1 Nepa, 1 Salamandra.
1 Meles labradoria, *American Badger.*
1 Sciurus capistratus, *Fox Squirrel.*
1 Sciurus carolinensis, *Grey Squirrel.*
1 Tamias quadrivittatus, *Four-lined Squirrel.*
1 Arctomys monax, *Wood Chuck.*
1 Mustela erminea, *Ermine Weasel.*
2 Felis rufa, *Wild Cats.*
1 Ulula nebulosa, *Barred Owl.*
1 Circus cyaneus, *Hen Harrier.*
1 Scolopax Wilsonii, *Grey Snipe.*

Box, containing Fossils and River Shells of the Patuxent and St. Mary's Rivers; Fossils Shells, from mouth of Potomac Creek, Virginia; Fossil Shells, Bones, Teeth, and Clay, from Stafford or Hollis' Cliff, Virginia; Fossil Shells, Bones, Teeth, and several varieties of Selenite Crystals, from St. Mary's, Maryland; Relics from the old State House, St. Mary's, consisting of Musket Lock, &c., &c.; Crystals from Patuxent River; Fresh Water, and other Shells, from the Potomac River, &c., &c.—*From J. G. Bruff.*

Plants, Endocarpon minatum, on Rocks, Marshfield, Massachusetts; Parmelia cænia.—*From J. Porter, Plainfield, Massachusetts.*

Box, containing specimens of Slate, Coke and Coal.—*From A. Wooldridge, Richmond, Virginia.*

Quartz.—*From Mrs. Catherine J. Clarke, Chesterfield, Virginia.*

Coins of Central America.—*From J. W. Simonton.*

Flax, from John B. Williams, U. S. Consul, New Zealand.—*From Hon. A. P. Upshur, Secretary of State.*

Boxes, four, of Fossils and Shells of Florida, collected by Mr. T. A. Conrad, attached to squadron under command of Commander L. M. Powell.—*From Hon. D. Henshaw, Secretary of the Navy.*

Box of Geological and Mineralogical specimens, from Cannelton, and other parts of Iowa Territory, &c., &c.—*From Dr. F. Hall.*

Two boxes, Shells and Minerals of Massachusetts.—*From Dr. Wm. Prescott, Lynn, Massachusetts.*

War Club, used by the Blackfoot Indians, obtained by Geo. Croghan.—*From Master Washington Totten.*

Cryptogamous Plants.—*From D. Porter, Plainfield, Massachusetts.*

Four boxes objects of Natural History, a valuable and large collection.—*From His Royal Highness, Prince Momfanoi, Siam.*

Specimens of Ovi-Positer of the Cicada septemdecim, and of Branches of Trees in which the Eggs are deposited.—*From Robert E. Peyton, Fauquier County, Virginia, to accompany and illustrate his paper on that Insect.*

Box, containing Turkish Horseman's Hammer; Turkish Horseman's Massue, or Club; Ancient Janissary Lantern; one pair of Ancient Cavalry Stirrups; Abyssinian Lance; Toug, or Pasha's Tail, such as were formerly carried before a Pasha, when on march, to denote his rank; Heavy Turkish Rifle, of antique form: Light Turkish Rifle, richly damaskined; Dervish Craak, to repose the arm on; Light Turkish Rifle, richly damaskined.—*From John P. Brown, First Dragoman of the Legation of the United States at Constantinople.*

For the Library.

Essai Général d'Education, Physique, Morale et Intellectuale, &c., &c., par M. A. Jullien de Paris; Paris, 1833, 8vo.—Compte-Rendu du Congrés Scientifique, tenu à Strasbourg, par M. Jullien de Paris, 1842.—Exposé de la Méthode d'Education de Pestalozzi, &c., par M. J. de Paris, 1802, 8vo.—Le Biographie Universel XVII, Jullien de Paris, 1842.—*From Marc Antoine Jullien de Paris.*

British Dominions in North America, &c., &c., by Joseph Bouchette, Esq., 2 vols., 8vo.; London, 1832.—Topographical Dictionary of Lower Canada, by the same, 1 vol., 4to.; London, 1832.—North American Sylva, by F. A. Michaux; Philadelphia, 1817.—*From the Hon. Richard Rush.*

Real Decreto, &c., &c., para el Gobierno de la Mineria; Madrid, 1842.—*From George Read, United States Consul, Malaga.*

Biographie des Contemporains, ou Dictionaire Raisonné et Historique de tous les Hommes qui, depuis la Revolution Française, ont acquis de la Célébreté par leurs Actions, leurs Ecrits, leurs Erreurs, et leurs Crimes, soit en France, soit dans les Pays Etrangers; adorned with 300 vignettes: 20 vols., octavo; (a very rare and valuable work.)—*From A. N. Girault.*

Observations et Comparaisons Statistiques, sur le Mouvement de la Population de la Havane dans les cinq Ans écoulés de 1825 et 1820; (extrait de l'Histoire Politique et Naturelle de l'Ile de Cuba de M. Ramon de la Sagra.)—Informa sobre el Estado Actual de la Industria, Belga, &c., by the same.—*From the Author.*

Proceedings of the Boston Society of Natural History, from January 6, 1841, to May 4, 1843.—*From the Society.*

Reports of the Zoological Society of London, 1842.—Proceedings of the Society, January, February, March, and April, 1842.—List of Fellows and Members, 1842.—*From the Society.*

Nuove Ricerche ed Osservazioni Intorno all 'Avvelenamento Cianidrico Imputato al Signor Alessandro Heretier. Consultazione di Girolano Botto; Genoa, 1842.—*From C. E. Lester, United States Consul, Genoa.*

Society for the Encouragement of Arts, Manufactures and Commerce, Premiums for the Sessions, 1843, 1844, 1845; London, 1843.—*From the Society.*

Discourse on the Qualifications and Duties of an Historian, delivered before the Georgia Historical Society, February 13, 1843, by Hon. Mitchell King.—*From J. K. Tefft, Corresponding Secretary of the Georgia Historical Society.*

Notice sur l'Etablissement Geographique de Bruxelles, par M. Drapiez; Bruxelles, 1842.—*From M. Quetelet, Astronomer Royal, &c., &c., Brussels.*

Quarterly Journal of the Newfoundland Agricultural Society, March 3, 1843.—*From the Society.*

Vindication of Claims to certain Inventions and Improvements in the Graphic Art, by Asa Spencer.—*From the Author.*

United States Literary Advertiser, New York, July, 1843.—*From the Publishers.*

Appleton's Literary Bulletin, &c., New York, June, July, and August, 1843.—*From the Publishers.*

Royal Gazette, Bermuda, May 23 and 30, June 20 and 27, July 4, 11, and 25, 1843, with Meteorological Tables.—*From Governor Reid, Bermuda.*

Mémoires de la Société Royale des Antiquaires du Nord, 1840, 1843, Section Américaine; Copenhagen, 1843, 8vo.—Memoire sur la Découverte de l'Amerique, au Dixieme Siècle, par C. C. Rafn, Copenhagen, 1843.—*From the Royal Society.*

Various Pamphlets, on Religious Subjects, by Rev. D. Thom.—The Assurance of Faith, or Calvinism Identified with Universalism, by the same, 1833, 2 vols., octavo.—Wang Keaon, &c., &c., or the Lasting Resentment of Miss Keaon and Wan Wang, a Chinese Tale, founded on fact, translated from the original, by Robert Thom, Esq., resident in Canton, 1839.—Æsop's Fables, translated into Chinese, with a Preface on the Chinese Language, by Robert Thom; Canton, 1840.—Divine Inversion, &c., &c., by Rev. David Thom; London, 1843.—*From the Authors.*

Address before the Natural History Society of Hartford, Connecticut, by S. Farman Jarvis, D. D., President, 1836.—*From Mr. Winder.*

Journal of the American Oriental Society, vol. 1, No. 1; Boston, 1843.—*From the Society.*

Elements of Arithmetic, by F. R. Hassler, ninth edition, Washington, 1843.—*From the Author.*

Doct. Patterson's Discourse before the American Philosophical Society of Philadelphia, on its One Hundredth Anniversary, May 25, 1843.—*From the Author.*

Première Deuxième et Troisième Epitres d'Usamer, a ses Contemporains, par S. Herpain.—*From the Author.*

Proceedings of the Academy of Natural Sciences of Philadelphia, Nos. 26, 27, 28, 29, May to August, 1843.—*From the Academy.*

Package of Newspapers, Kingston, Jamaica.—*From R. M. Harrison, Consul.*

Appleton's Literary Bulletin.—*From the Publishers.*

The Western Lancet, Cincinnati, Nos. 1, 2, 3, vol. 2, May, June, July, 1843.—*From Dr. L. M. Lawson, Editor.*

Abstract of Correspondence.

Letters—

To Edward Everett, Minister at London, July 1, 1843: Enclosing list of societies in correspondence with the Institute, and asking further information on the subject, with a view to enlarge the number, &c.

To Henry Wheaton, American Minister, Berlin, on same subject.

To D. Jenifer, American Minister, Vienna, on same subject.

To H. Ledyard, American Minister, Paris, on same subject.

To Michael Mahon, U. S. Consul, St. Iago de Cuba, July 7, 1843: Acknowledging receipt of a box of copper ores, from Cobre, &c.

To Lieut. Wm. Eustis, U. S. Dragoons, July 11, 1843: Acknowledging receipt of a cask and box from him, containing objects of natural history, &c.

To Chev. G. de Lisboa, Minister of Brazil, July 26, 1843: Communicating copy of certain proceedings of the Institute.

From John Carroll Walsh, Baltimore County, Maryland, July 26, 1843: Telling him that the Secretary of State has presented the coin he sent, and his letter to the Institute.

To R. M. Harrison, U. S. Consul, Kingston, Jamaica, July 27, 1843: Enclosing paper respecting the copper ores he sent; acknowledging letters, &c.

To Joseph Balestier, U. S. Consul, Singapore, August 21, 1843: Asking him to be the medium of conveying to Prince Momfanoi the thanks of the Institute for the valuable presents he has sent, and stating that it was probable the Institute would forward some boxes in return, through him, &c.

To Capt. Babbitt, U. S. Army, Hancock Barracks, Houlton,

Maine, September 9, 1843: Thanking him for the box sent by Col. Cross, from him.

Letters and Communications.

From the Zoological Society, London, Wm. Rees, Secretary, September 15, 1842: Acknowledging receipt of first and second bulletins, with thanks.

From M. Quetelet, Astronomer Royal and Perpetual Secretary of Academy of Sciences, Brussels, October 23, 1842: Acknowledging first and second bulletins, with thanks.

From Victe. d'Archiac, Secretary Geological Society of France, (to D. B. Warden,) Paris, November 30, 1842: In reply to a proposition to exchange transactions with the Institute.

From W. S. MacLeay, Sidney, New South Wales, December 17, 1842: Acknowledging letter, and expressing a desire to aid the objects of the Institute.

From F. Arago, Perpetual Secretary, Royal Academy of Sciences, Paris, February 6, 1843: Acknowledging, with thanks, the bulletins of the Institute.

From Sir Benjamin Brodie, M. D., &c., London, March 3, 1843: Is highly gratified at his election as a member, and expressing his best hopes and wishes for the infant Institute.

From M. Jullien de Paris, Paris, March 20, 1843: Expressing great pleasure at being made a member; forwarding a copy of his work on Pestalozzi's system of education, the resumé sommaire du dernier congrès scientifique de France, and a biographical notice of his own life and labors.

From Joseph Balestier, U. S. Consul, Singapore, April 14, 1843: Stating that F. Momfanoi, the Prince Royal of Siam, has sent to his care for the Institute, some cases, which he has shipped on board the India, bound to Boston, for which he (the Consul) paid the freight, &c.

From Sociedad Economica Barcelonesa de Amigos del Pais, (by Isidoro Anquilo, Secretary,) Barcelona, April 18, 1843: Acknowledging, with thanks, the publications of the Institute, and requesting that future communications may be forwarded through Don Pablo Chacon, Consul of Spain, Philadelphia.

From Robert M. Harrison, U. S. Consul, Kingston, Jamaica, to the Secretary of State, May 4, 1843: Transmitting a box of copper ores from a mine in Jamaica, lately discovered, of which he hopes Government will cause an analysis to be made, &c.

From Professor Joseph Gene, Curator Royal Institution of Natural History, Turin, May 20, 1843.

From Edward Everett, American Minister, London, May 22, 1843: Acknowledging letters, &c., and will be happy to render any service in his power to the Institute.

From Dr. Frederick Tamnau, Jr., Berlin, May 24, 1843: Proposing exchanges, and enclosing list of minerals, &c.

From Michael Mahon, U. S. Consul, St. Jago de Cuba, May, 1843: Has shipped a box of copper ores from the mines of Cobre, per brig Emily, Capt. John H. Bernadon, bound for Philadelphia.

From H. Wheaton, &c., Berlin, June 1, 1843: On Baron Von Humboldt's work on the physical geography of Central Asia.

From Rev. David Thom, Liverpool, June 2, 1843: Acknowledging letter; is highly gratified at being made a member of the Institute; will shortly forward, through Mr. J. B. Murray, of New York, several works by himself and his brother, now acting British Consul, at Canton, a distinguished Chinese scholar.

From Dr. Thomas Sewall, London, June 3, 1843: Remarks of eminent persons with whom he has conversed concerning the Institute, showing their favorable feelings, &c.

From C. S. Todd, American Minister, St. Petersburg, $\frac{6}{18}$ June: Acknowledging letter of 13th of May; has submitted it to M. Pierre Chicacheff, whose promised books and maps will be sent to the Institute by the first opportunity.

From Hon. Richard Rush, Philadelphia, June 7, 1843: Presenting several valuable works, and offering observations respecting the Smithson fund, in continuation of a former letter on the same subject.

From Thomas C. Shelden, Detroit, June 10, 1843: Has forwarded by W. T. Carroll, of Washington, a specimen of selenite, from Grand River, where it occurs in great quantity, and asks its quality, &c.

From J. V. C. Smith, Boston, June 10, 1843: Presenting thanks for his election, and offering to forward soon to the Institute some presents worthy of acceptance.

From William Ferguson, London, June 10, 1843.

From Abiel Abbott, Peterboro, New Hampshire, June 12, 1843: Will aid the Institute, &c.

From Cyrus Mendenhall, (to Mr. Ellsworth,) Cleaveland, Ohio, June 17, 1843: Offering to deliver at Washington, for $1500, the mass of native copper now lying on the Ontanagon river, lake Superior.

From Lieut. Cadwalader Ringgold, U. S. Navy, Baltimore, June 19, 1843.

From Ambrose Baber, Chargé d'Affaires, Turin, June 20, 1843: Stating that Mr. Lester, Consul of the United States, at Genoa, will ship, via New York, the volumes referred to in his last letter; also, that the Professor of Natural History in the Royal Academy of Sciences will send by the same vessel a box of books, &c., as a present for the Institute.

From William Anderson, Washington, June 23, 1843: Communicating a paper on the French Revolution.

From Dr. Frederick Hall, Cannelton, Iowa, June 24, 1843: Description of the geology and mineralogy of a tract of country on the Ohio river, examined by him.

From Job. R. Tyson, Philadelphia, June 27, 1843: Declaring a deep interest in the Institute, and will do all in his power to promote its objects.

From Rev. F. Wayland, President Brown University, Providence, Rhode Island, June 30, 1843: Expressing a desire to obtain duplicates of the Exploring Expedition, for the cabinet of the college, on which subject he has also written to the President and to Mr. Upshur.

From William Anderson, Washington, July 1, 1843: Presenting a coin of Philip V of Spain, 1724.

From C. S. Todd, American Minister, St. Petersburg, July 1, 1843: Asking a copy of the President's speeches, and Dana's article on the Exploring Expedition; and recommending Admiral Lütke as a corresponding member.

From J. Woodhouse Stevens, London, July 1, 1843.

From Col. J. B. Murray, Petworth, England, July 2, 1843: The model of the Nelson monument is ready, and he hopes to obtain a model of the miniature scaffolding which surrounds it, which he thinks will be of use to the mechanics in the United States.

From Dr. Robert E. Peyton, The Plains, Fauquier County, Virginia, July 4, 1843: Sending a box of cicada septemdecim, among which he supposes there is a new variety, differing in music and habits.

From John Carroll Walsh, (to Secretary of State,) Baltimore County, Maryland, July 4, 1843: Presenting a coin of George III, Virginia, 1773.

From the Hon. A. P. Upshur, Secretary of State, July, 1843: Enclosing the foregoing for the Institute.

From Robert M. Harrison, U. S. Consul, Kingston, Jamaica, July 8, 1843: Acknowledging letters, and enclosing letters and papers on meteorology, from Dr. Arnold, for Mr. Espy.

From J. H. Causten, Jr., M. D., Washington, July 10, 1843: Communicating an auto-biographical notice of the late Capt. Dumas, of the Engineer Corps, U. S. Army.

From Rev. R. R. Gurley, Washington, July 10, 1843: Recommending Mr. J. R. Peters, appointed by the American Institute to visit China with our mission, as a corresponding member.

From Richard Smith, (to the President and Directors,) Washington, July 10, 1843.

From Stephen Taylor, (late of Wisconsin,) Philadelphia, July 10, 1843: Asking for copy of third bulletin, and other late publications of the Institute.

From John K. Townsend, Washington, July 11, 1843: Has ex-

amined the contents of the cask and box presented to the Institute by Lieut. Wm. Eustis, U. S. Dragoons, and encloses a list, &c.

From T. A. Conrad, Philadelphia, July 14, 1843: Has returned from Florida, leaving the boxes of collections on board the United States steamer Poinsett, by which they will be brought to Washington. Will prepare a list of the shells, &c., as soon as his health will permit.

From H. Wheaton, American Minister, Berlin, July 15, 1843: On the Panama canal.

From W. Prescott, M. D., Lynn, Massachusetts, July 17, 1843: Has shipped by brig Mozart, Captain Reynolds, for Alexandria, a box of shells, and a box of geological specimens of Massachusetts. Will be happy to receive in exchange duplicates of the Exploring Expedition.

From Union Transportation Line, New York, July 18, 1843: Receipt for two boxes, from Mr. Wetmore.

From Lieut. W. Eustis, U. S. Dragoons, New York State, July 19, 1843: Acknowledging letter, and describing contents of a box and barrel of zoological and other specimens, from Fort Scott, presented by him to the Institute.

From T. J. Wetmore, P. M., Cambridge, Massachusetts, July 21, 1843: Proposing exchanges of shells, and giving a list of what he can furnish of Massachusetts shells, &c.

From J. Porter, Plainfield, Massachusetts, July 21, 1842: Asking for certain pamphlets; enclosing plants, and promising others, if they will be acceptable.

From General Epaphras Hoyt, Deerfield, Massachusetts, July 24, 1843.

From the Chev. G. de Lisboa, Minister Resident of Brazil, July 28, 1843.

From the same, same date: Acknowledging receipt of copy of the report of the committee of the Institute upon the Flora Fluminensis presented by him to the Institute, in the name of his Government, to which he will immediately forward it.

From John Carroll Walsh, Baltimore County, Md., July 30, 1843.

From Lieut. D. P. Woodbury, Engineer Corps, Washington, July 31, 1843: In the absence of Col. Totten, has forwarded the package sent to him for George E. Chase, to Pensacola, where he now resides.

From H. Wheaton, American Minister, Berlin, July, 1843: Enclosing an addition to his paper on the Panama canal, and recommending Professor Von Raumer, Rector of the University of Berlin, as a corresponding member.

From A. S. Wooldridge, Richmond, Virginia, July, 1843: Giving an account of the burning of the Midlothian coal mines, and sending a box of specimens, &c.

From B. S. Burling, Philadelphia, August 1, 1843: Enclosing bill of lading for a box of copper ores of Cuba, from M. Mahon, U. S. Consul, St. Jago de Cuba.

From General Walter Jones, Washington, August 5, 1843.

From Marcus C. Buck, M. D., Washington, August 6, 1843: Enclosing bill of expenses of Medical Department, which he has paid, and asks if there be any fund to meet such bills.

From Col. J. J. Abert, Washington, August 7, 1843: Presenting, in the name of J. W. Simonton, a package of coins of Central America.

From A. H. Palmer, American and Foreign Agency, New York, August 9, 1843: Enclosing letter from His Royal Highness, Prince Momfanoi, of Bankok, Siam, announcing four boxes of presents to the Institute, of which he gives a list of contents, and expressing a desire to have, in exchange, military and naval books, &c. Recommending as a corresponding member, W. B. O'Shaughnessy, M. D., Professor in the Medical and Hindoo College of Calcutta, who purposes, on his return to India, to send to the Institute oriental manuscripts.

From T. Purrington, Washington, August 11, 1843.

From J. G. Bruff, Washington, July 14, 1843: A symbolic letter, announcing that he has presented to the Institute a box of fossils and river shells, lately collected by himself on the shores of the Potomac.

From Brantz Mayer, Baltimore, August 9, 1843: Explaining detention of the boxes of minerals of Mexico, presented by the Minister of War, M. Tornel, and the steps he has taken to have them forwarded from Vera Cruz, &c.

From A. N. Girault, Washington, August 12, 1843: Presenting a valuable French biographical work.

From Hon. David Henshaw, Secretary of the Navy, Washington, August 14, 1843: Enclosing copy of a letter from Lieut. Leven M. Powell, U. S. Navy, which was accompanied by four boxes of shells, &c., collected in Florida by Mr. Conrad, (who was attached to his squadron,) for the Institute.

From Charles C. Rafn, Secretary Royal Society, of Northern Antiquarians, Copenhagen, April 18, 1843: Transmitting two volumes memoirs on the ante-Columbian tribes of America.

From Chev. Placido Portal, Palermo, May 15, 1843: Acknowledging letter of appointment, with thanks, and will shortly send to the Institute a collection of Sicilian shells, and minerals, &c.

From H. L. Ellsworth, Patent Office, Washington, May 16, 1843: Enclosing manuscript on sugar refining, with plates, from Wm. Kreisely; offered for $24.

From Rev. David Thom, Liverpool, June 17, 1843: Presenting various Chinese and other works, from himself and his brother.

From H. Wheaton, American Minister, Berlin, August 1, 1843:

Proceedings of the Berlin Academy of Sciences, in honor of the memory of Leibnitz. His genius and labors, &c.

From Capt. P. St. George Cooke, U. S. Dragoons, Fort Leavenworth, August, 1843: Describing the "buffalo grass" of the West, which he believes he has discovered to be a *new*, and hopes will become a valuable "grain."

From George E. Chase, Pensacola, August 10, 1843.

From H. Wheaton, American Minister, Berlin, August 14, 1843: Labors of Professor Lepsius, of Berlin, in Egypt; antiquities; ancient canal across the isthmus of Suez.

From Isaac G. Strain, U. S. Navy, Norfolk, August 15, 1843: Acknowledging membership, with thanks, and expressing a hope that he may be useful to the Institute in the course of his contemplated travels in the interior of South America, &c.

From S. M. E. Goheen, (to Dr. Pickering,) Columbia, Pennsylvania, August 15, 1843: Stating that he has a variety of African curiosities which he offers as a present to the Institute.

From A. Thomas Smith, Chief Clerk, Navy Department, August 16, 1843: Will affix labels to the four boxes from Florida, collected by Mr. Conrad, and send them to the Institute.

From D. Porter, Plainfield, Massachusetts, August 19, 1843: Transmitting further specimens of plants of Massachusetts, to the Institute.

From Col. Trueman Cross, U. S. Army, New York, August 21, 1843: Sending a box for the Institute, from Bangor, Maine, and a bill of lading, &c.

From Edward Winslow, Boston, August 21, 1843: Enclosing bill of lading for four boxes, &c.

From W. Snethen, Washington, August 21, 1843: Sending copy of meteorological table kept by D. T. Lillie, of New Orleans, and asking to become a resident member of the Institute.

From S. M. E. Goheen, Columbia, Pennsylvania, August 22, 1843.

From J. Hamilton Couper, Darien, Georgia, August 27, 1843.

From Dr. Robert E. Peyton, Fauquier County, Virginia, August, 1843: On the cicada septemdecim, as it appeared in Fauquier County, Virginia, in 1843.

From Col. T. Cross, U. S. Army, New York, August 28, 1843: Stating that the box sent on by him is from Capt. Babbitt, of the Army, stationed at Houlton, Maine.

From W. Snethen, Washington, August 30, 1843.

From Joseph Taylor, Jr., Baltimore, August 16, 1843: Bill of lading and transportation, &c., to be delivered for freight, and $3 25 charges.

From Brantz Mayer, Baltimore, September 2, 1843: Informing Secretary that he has been drawn on for $15, expenses upon the boxes of rare and valuable mineralogical and geological specimens

from M. Tornel, Minister of War of Mexico, to the Institute, and begs that the money may be remitted to him.

From John Varden, Washington, September 7, 1843: Has received and opened a large box directed to the Institute, which he finds full of Turkish arms, &c., (box from J. P. Brown, Dragoman United States at Constantinople.)

From R. J. Cleveland, Public Store-keeper, Boston, August 16, 1843: Forwarding bill of lading for a box from Smyrna for the Institute.

The Hon. James Madison Porter, Secretary of War, and chairman of the meeting, stated:

That the celebrated mass of native copper of the Ontanagon, was probably now on its way to Washington, for the Institute. A letter from General Cunningham, agent for the mineral lands in Wisconsin, and on Lake Superior, of the 28th of August, had informed the Department that it had been removed from its location on the Ontanagon river, and was then on the shore of Lake Superior. It had been removed from its bed by means of a temporary railway to the Ontanagon, below the forks, and thence transported on a scow to the lake. The removal had been effected by Mr. Eldred, who claimed the copper, under an alleged purchase of the Indians, with the aid of a large number of men, who had either been engaged or volunteered for the purpose of aiding in its transportation.

The Department did not recognize the purchase from the Indians, if any such had been made, and had directed the agent to take possession of it on behalf of the Government, and transport it to Fort Brady, at the Sault de St. Marie, whence the Secretary of the Treasury had directed a revenue cutter to transport it to Buffalo, at which place the Quartermaster's Department would take charge, and transport it to this place. The weight of the mass, the chairman stated, was probably six thousand to seven thousand pounds!

The agent had been directed to make to those who had transported it to the lake, an ample compensation for their labor and expense in so doing, although their right to the mass of copper itself was altogether denied, as it belonged to the Government of the United States.

Any claim to the ownership must be established to the satisfaction of Congress, before it would be recognized by the Department.

Stated Meeting, November 13, 1843.

The Recording Secretary announced the following donations:

For the Cabinet.

Coluber, from Rio Janeiro; Exocetus, from Rio Janeiro.—*From Charles De Selding.*

Copper Cent of America, Washington and Independence, 1783.—*From Capt. J. S. Inglee.*

One of the Swords brought from France by General Lafayette, which he gave to the officers who were with General Washington.—*From Joseph Harbaugh.*

Pincushion, made from the dresses of General Washington's Staff, while at Harrisburg, Pennsylvania.—*From*

Lead Ore, from Arkansas; Cotton and Cotton-Seed, from Big Black River, Hides County, Mississippi.—*From M. D. Collins.*

Two specimens of Silver, from Coast of California.—*From J. T. Ames.*

Trilobite, from Morgan County, Sleepy Creek, Virginia.—*From Alexander Ambler.*

Two Newspapers, from Newfoundland; five pieces of Continental Paper Money.—*From J. Templar.*

Plaster Head of General Washington.—*From Miss C. Gallaudet.*

Bronze Statute of General Washington.—*Deposited by P. W. Gallaudet.*

Copper Coin of George II, of England.—*From Daniel Holmes.*

Copper Coin, with the Lord's Prayer on one side, a Crown and Halo on the other.—*From Peter Callan.*

Large Silk Worm, from New Orleans; inhabits the willows on the banks of the Bayous.—*From James Saul.*

Map of Madrid, and Plaster Cast of a Sacrifice.—*From Mrs. Margaret Julien.*

Ortygometra noveboracensis, (New York Rail,) said to be the only specimen ever found in this District, killed on the Potomac river, opposite Washington.—*From George Washington Custis.*

For the Library.

History of Vermont, Natural, Civil, and Statistical, in three parts, octavo, by Zadock Thompson.—*From Henry Stevens.*

Stated Meeting, December 11, 1843.

The Corresponding Secretary announced the following contributions and donations:

For the Cabinet.

Package of Seeds collected by Dr. Schrenk, for the Imperial Botanic Garden of St. Petersburg, from the country of the Kirghees.—*From the Imperial Garden, by Professor Fischer.*

Two specimens of Proteus, or Hypochton anguinus, (in a large bottle,) very rare, found only in Carniola, Austria, described by Dr. Schreibers, in Philosophical Transactions, London, 1801, &c., &c.—*From Charles de Schreibers, M. D., Aulic Councillor, Director of the Imperial and Royal Cabinet of Natural History at Vienna.*

Stalactite, from the celebrated cave of Adelsburg, in Carniola; Chamois' Horns, killed on the hunting grounds of the Archduke John of Austria, from the mountains of Styria; Candlestick, made of Salzberg Marble, with which the columns of the Walhalla

are ornamented.—*From Daniel Jenifer, American Minister at Vienna.*

Three boxes of African Curiosities, containing as follows.—*From S. M. E. Goheen, M. D., of Columbia, Pennsylvania.*

Specimens of woods, consisting of Red Oak, Poplar, White Oak, Walnut, Ironwood, Teak, Cedar, Mahogany, Brimstone, Lowland Mangrove, Bastard Mahogany, Camwood, Gauiac, Mulberry, Persimmon, Bassa, Lime, Orange, Saffron, and Upland Mangrove: in all, a variety of twenty-two.

An ibis, and twelve other stuffed birds, from Gambia, head of a palm bird, 1 vol. of African Luminary, specimen of frankincense and minerals, (copper, &c.,) from Sierra Leone, buffalo horn, native skull, native cloth, native hammock, native loom, from the Gambia, fish net, two table mats, hat, native grass bag, shuttle for a loom, spoons and comb, model of native canoe, tongs for lighting pipe, grie-grie for neck, grie-grie to protect the body, slave whip, war knife and grie-grie, three war spears and three grie-gries, hunting bag, war dirk, slave rope, buffalo horn, war horn, saw of the saw-fish, wrist ornaments, ancle ornaments, worn by the *nobility*, elephant tail, parasite on orange, head of an adult chimpansee, ear of Guinea corn, ibis, chamber in which white ants are kept for breeding, a small collection of shells, hippopotamus skull, from the Gambia, elephant skull, from near Monrovia, skin of the African crocodile, from St. Paul's River, Liberia, three guanas, four millepedes, the tails of two skates, one centipede, three guanas, large serpent, one rare fish, one sea nettle, cuttle fish, sea urchin, young skate, chamelion, toad, land snail, blue lizzard, electric eel, head of crested snake, boa, from Sierre Leone, tree frog, millepedes, crabs, chamelion, young ray, serpents, small monkey, crested snake, bat, double-headed snake, African white ants, tarantulas, hairy tarantula, African red ants, African black or driver ants, soldier ants, and many others.

Two Boxes, containing the following specimens of Gold and Silver Ores, &c.—*From John Parrott, U. S. Consul, Mazatlan, Mexico.*

Large specimen of silver ore, weighing eighty-five pounds, from the mine of Paunco, in the Department of Sinaloa, Mexico.

Oxide of iron and silver, from the mine of Quintero, in Sonora.

A very rich specimen of native silver ore, with gold, from the mine of San Estevan, Chihuahua.

Native gold and silver ore, from the mine del Oro, Chihuahua.

Native gold, specimen from the surface of the earth, from the mine of Jesus Maria, Chihuahua.

Brittle malleable sulphuret of silver and gold, from Guadaloupe and Caloo.

Brittle sulphuret of silver, from Guadaloupe and Caloo.

Small grains of native gold, and brittle sulphuret of silver, from same.

Specimen with native silver visible, from the mine of Plateros, Zacatecas.

Sulphuret of silver, from Lombrerete.

A piece of native silver, weighing two and a half marks, ore which will yield 90 per cent. of pure silver, from the mine of Batophilas.

Specimen from the mine of Galligo, Zacatecas.

Malleable sulphuret of silver, from Guadaloupe.

Native clavo, or nail of gold, and sulphuret of silver.

Silver ore, from San Clemente, Zacatecas.

Gold and silver mixed, from the Puerta Sinaloa.

Native silver ore, from Fresnillo.

Silver ore, from the Galliga, Zacatecas.

Native silver ore, from Plateros.

Oxide of iron, and silver mixed, from Sonora.

Specimen of native silver in granite—the only mine in the world, yet known, which exhibits silver in granite. The mine is called Refugio, in the Department of of Chihuahua.

Five beautiful specimens from Sombrerete.

Native silver ore, from San Clemente, Zacatecas.

Specimen of native silver leaf, from Cosala.

Crystal, from the 70th degree of north latitude, Kamtschatka, found by Captain John Dominis, of the American brig Joseph Peabody, of Boston.

Sulphuret of silver, with native gold.

Small specimens, with native gold and silver visible.

Small packages in paper, with explanation on the envelope.

A large Gourd, covered with netting, from the Sandwich Islands; one Gourd in shape of a bottle, neatly worked; two China Hats; one pair China Shoes; a string of two hundred pieces of China Coin; specimen of the Bark of the Cocoa-nut tree; sample of Fejee Tobacco; six small specimens of Minerals; specimen of Wood from the United States frigate Philadelphia, 1832; nineteen specimens of Polished Marble.—*From Lieut. G. F. Emmons, U. S. Navy.*

Large box, containing the Head and Horns of a five year old Bull Moose, shot on the head waters of the St. John's, by Lieut. J. L. Donaldson, 1st artillery, and prepared by Dr. Isaacs, U. S. Army; Head and Horns of a Carriboo, prepared and presented by Dr. Isaacs; the entire Skin of a Sable, or Martin, by the same; the entire Skin of a White Weasel, by the same; a Lake Trout, by the same.—*From J. Bankhead Magruder, 1st Lieut. 1st Artillery, M. J. Burke, 1st Lieut. 1st Artillery, G. Jones, 2d Lieut. 1st Artillery.*

Three large boxes, containing the miniature Model of the Nelson Monument, and of the Scaffolding used in its construction.—*From the architect, Wm. Railton, by the hands of James B. Murray, Esq., of New York, (by Secretary of State, Mr. Upshur.)*

Four boxes, containing a rich collection of Geological and Mineralogical Specimens of Mexico.—*From General José Maria Tornel, Mexican Minister of War and Marine, by the hands of Brantz Mayer, late Secretary of Legation, U. S., at Mexico, (by Secretary of State.)*

Two packages, containing sixty-seven Virginia Provincial Notes and twenty-four Maryland Provincial Notes.—*From Francis B. Mayer, Baltimore.*

Serpent-shaped Potato, and deformed Crab's Claw, from St. Mary's County, Maryland.—*From Rev. Joseph Carberry.*

A perfect Skin of a large Buck Elk, (Cervus americanus.)—*From Joseph Tuley, Virginia.*

Collection of rare Coins and Medals, as follows.—*From Charles Rhind, of New York, late U. S. Commissioner to Turkey.*

1 Russian Medal, struck after the capture of Parma from the Turks.
2 Russian Medal, on the peace with Turkey.
3 Russian Medal, on the death of the Empress, widow of Alexander.
4 Turkish Piastre, of the year 1143, (of the Hegira.)
5 Silver Rouble of Russia, 1829.
6 Coins of Russia, 1830.
7 Para of Turkey, (hardly now to be found.)
8 Greek Coin, of very remote antiquity.
9 Aspre, reign of Sultan Selim, (extremely rare.)

10 Gold Coin, Mahmoud 2d, 20 Piastres.
11 Gold Coin, Mahmoud 2d, 5 Piastres.
12 Turkish aspres and Paras, of various dynasties, (all extremely rare.)
13 Turkish Coins, Mahmoud 2d.
14 Specimens of the material forming the mosaic work of the dome of St. Sophia, built by Constantine the Great.

One hundred and fifteen specimens Crustacea, Fish, &c., (many very rare,) collected by Charles De Selding, in Brazil and China, as follows—*From Dr. William Brown, Fredericksburg, Va.*

Thirty-five species, and forty-nine specimens, of Crustacea, of the following genera: *Palenurus, Mysis, Squilla, Ibacus, Scyllarus, Pagurus, &c., &c.*

Twenty-six species, and sixty-two specimens, prepared Fishes, of the following genera: *Exocetus, Hippocampus, Tetradon, &c., &c., &c.*

Also several species of Asterias, &c.

Three packages; 1st, Cranium and hands of a Chimpanzee, or Ourang Outang, of Africa; rope made from a peculiar grass on the gold coast.

2d, Black and blue cloths of Africa, one of cotton, made of the native material, (Gossipium;) the other from grass of native dyes, made at St. Andrews, or Cape Lohoo, 180 miles from Cape Palmas.

3d, Native African Pipe, made at Coomassie, the capital of Ashantee.

Box, containing Bituminous Coal of Virginia, apparently changing from charcoal to stone coal; specimen of Clay, suitable for fire brick, and said to be of a superior quality; two portraits of Indians, framed—1st, John M. Quincy, a leading man among the Stockbridge Indians; 2d, Joseph Porus, a Penobscot Chief; two pipes of the Sac and Fox Indians; Indian Biographies and Portraits, Vols. 14, 15, 16, and 17.—*From Hon. James Madison Porter, Secretary of War.*

Three Shilling Note of New Jersey, of George III, March 25, 1776; a Cent, Washington, 1783.—*From John P. Bethell, M. D., Philadelphia.*

Engraved Impressions of certain Brass Plates, found in an ancient mound, near Kinderhook, Pike County, Illinois, covered with hieroglyphics, &c.—*H. Peake, Hannibal, Illinois.*

Copper Coin of Virginia, 1773.—*From J. H. Causten, Jr., M. D.*

Indian Axe, of Stone, (very fine,) found in a mound in Fairfax County, Virginia.—*From Washington Terrett, Esq., by the hands of Major T. P. Andrews.*

Three Notes, Baltimore money, 1840, sent by mail.—*Anonymous.*

Seven Boxes, containing Copper Ores, and other Geological specimens; a pair of Live Eagles; Mass of Native Copper, from Ontanagon River.—*From Hon. J. M. Porter, Secretary of War.*

Ear of Corn, in form of a hand and arm.—*From B. B. French.*

Indian Arrow-head, from Virginia.—*From Mr. Thornberry.*

Box of Shells, and bottle of Fish, from Vermont.—*From Mr. Thompson, by Hon. E. Marsh.*

Collection of Minerals, from Louisville, Kentucky.—*From T. E. Brown.*

Piece of the Royal George, taken up from Spithead, in 1842.—*From Dr. Bartlett, by R. R. Waldron, U. S. Navy.*

Nut of the Vegetable Ivory Tree, from the Island of New Guinea;

also a small Box, made from nuts of the same tree.—*From Pishey Thompson.*

For the Library.

Map of the Industry of European Russia, with an indication of Fabrics, Manufactures, and the different branches of Industry of the Administrative Places, and Authorities for Commercial and Industrial Business of the Principal Fairs, Water and Land Communications, of the Ports, Light-houses, Landing Places, Custom-houses, Quarantines, &c., &c. Composed and published by order of His Most Imperial Majesty; St. Petersburg, 1842.—Coup d'Œil sur la Constitution Géologique des Provinces Méridionale du Royaume de Naples, suivi de quelques Notions sur Nice et ses Environs, par Pierre de Tchihatcheff, &c., &c.; Berlin, 1842.—*From M. Tchihatcheff.*

Enumeratio Plantarum Novarum, a Ch. Shrenk, Lectarum; Petropoli, 1841.—Ditto, 1842.—*From Professor Fischer, Imperial and Botanic Garden, St. Petersburg.*

Le Guide Médical des Maîtres, Maîtresses, de Pension, Curés, Dames de Charité, &c., &c., par le Dr. Guyetant, &c., &c.; Paris, 1842.—*From the Author.*

Experiments on Subterranean Electricity, made in Peunanee Mine, near Falmouth, by R. W. Fox, U. S. Consul, Falmouth.—*From Mr. Fox.*

Memoria, Intorno, a Parecchie Osservazioni, fatte nella Speciola dell' Universita Gregoriana in Collegio Romano dagli Astronomi della Compagnia di Giesù, l'anno 1839; Roma, 1839, quarto.—The same, 1840, 1841, quarto.—*From the Georgetown College.*

Verzeichniss der Ornitologischen Sammlung, von Louis Cavalli, in Darmstadt, 1829.—*From M. Cavalli, by the hands of D. Ruggles, Detroit.*

The Indian Tribes of North America, Nos. 14, 15, 16, and 17, folio, with portraits, &c.—*From Hon. J. M. Porter, Secretary of War.*

Brief account of the Discovery of the Brass Plates recently taken from a Mound in the vicinity of Kinderhook, Pike County, Illinois, with a Fac-simile of the Plates.—*From Hon. John J. Hardin, Illinois, House of Representatives.*

Trattado di Architettura Civile e Militare di Francisco di Georgio Martini, Architetto Senese del Secolo XV, publicato per cura del Cav. Cesare Saluzzo; Tornio, 1841, 2 vols., quarto, and 1 vol. folio, of plates.—*From the Chev. Saluzzo.*

Precis Analitique de l'Art de la Guerre, par P. Racchia, Lieut. Colonel, &c., &c.; Turin, 1832.—Code Civil, de Sardaigne; Turin, 1838.—Codice Penale, per gli Stati de Sardegna, &c.; Turin, 1841.—Congrès Scientifique de France et Vienne, Session tenue à Lyon, Septembre, 1841, 2 tomes, October.—*From Ambrose Baber, Chargé of United States at Turin.*

Notice sur l'Etablissement Géographique de Bruxelles, 1842.—*From M. Serruys, Belgian Minister, Washington.*

Airy's Tides and Waves, extracted from the Encyclopedia Metropolitana.—*From the Author.*

Semeiografia dei Volumi Ercolanesi, pel Cav. Lorenzo Blanco; Naples, 1842.—*From the Author.*

Index Nonus Seminum quæ Hortus Botanicus Imperialis Petropolitanus pro Mutua Commutatione offert, &c., &c.—*From the Imperial Garden.*

Constitution, &c., Northern Academy of Arts and Sciences, &c., Hanover, Vermont, 1843.—Proceedings of the American Philosophical Society, vol. 2, No. 26, April and May, 1843.—*From the Society.*

Oration of Hon. A. D. Murphy, before the Dialectic Society, Raleigh, North Carolina, 1843.—*From the Society.*

Memoir on the Reconnaissance of Rivers, translated by Lieut. W. R. Palmer, Topographical Engineers, 1843.—*From Lieut. Palmer.*

Messrs. Gallatin and Webster on the Northeastern Boundary, with a copy of the Jay Map.—*From the New York Historical Society.*

Royal Gazette of Bermuda, July 11, August 29, September 5, 19, 26, October 3, 10, 24, containing Meteorological Tables.—*From Governor Reid, Bermuda.*

Petrifactions, recuillies en Amerique, par M. Alexandre de Humboldt et par Charles Degenhardt, décrites par Léopold de Buch; Berlin, two copies.—*From Professor B. Silliman, through Col. J. J. Abert.*

New Elements of Botany, in French.—*From J. H. Causten, Jr., M. D.*

Account of the Shipwreck of the Royal George, bound in boards prepared from a plank of that vessel.—*From Pishey Thompson.*

The following works were presented through Dr. Sewall:

On the Venous System, by Professor Puchett, of Heidelburg.—*From the Author.*

On Fever, by Dr. McCormick, Belfast, Ireland.—*From the Author.*

On Climate, by Sir James Clarke.—*From the Author.*

Catalogue of the Royal College of Physicians.—*From Dr. Blundell.*

Works of the Archbishop of Dublin.—*From the Author.*

Dublin Clinical Medicine, by Dr. Graves.—*From the Author.*

Religious Question of Teetotalism.—*From Dr. Jeffries, London.*

Pamphlet on Malico, with a sample of the Plant.—*From Dr. Jeffries, Liverpool.*

Proceedings of the Royal Irish Academy; also, two Irish Laws.—*From Edward Cliborn, Librarian.*

Reports of two Operations for Ovarian Dropsy, by Mr. Walne.—*From the Author.*

Catalogue, and other Publications of the Royal College of Surgeons, London, procured by Sir B. C. Brodie, Wm. Lawrence, Esq., and Edward Stanley, Esq.—*From those Gentlemen.*

Report of the Sydenham Society.—*From Sir H. Halford.*

Life and Character of Dr. Godman, by Dr. Hodgshin, London.—*From the Author.*

Doctors Lombard and Windet on Insanity, Geneva.—*From the Authors.*

Mr. Stanley on Dislocations, London.—*From the Author.*

England and China, by Dr. Jeffries, London.—*From the Author.*

Treatment of Hare-lip, by Dr. Houston, of Dublin.—*From the Author.*

Statics of the Chest, by Dr. Jeffries, London.—*From the Author.*

Essay on Tetanus, by Von Ischarner, Switzerland.—*From the Author.*

Poems by J. Parnell, Esq., Ireland.—*From the Author.*

Prize Essay, by Dr. Davidson, of Glasgow, Scotland.—*From the Author.*

Work on Diet, by Dr. Davidson, of Scotland.—*From the Author.*

On Diseases of the Liver, by Dr. Thompson, of Glasgow.—*From the Author.*

Medical Notes and Reflections, by Dr. Holland, London.—*From the Author.*

Obstetrical Pamphlets, by Dr. Churchill, of Dublin.—*From the Author.*

Dr. Houston's Catalogues.—*From the Author.*

Catalogue of the Royal Society of London.—*From Dr. Marshall Hall.*

Abstract of Correspondence.

Letters—

To S. M. E. Goheen, Columbia, Pennsylvania, September 11, 1843: Respecting the three boxes of African curiosities forwarded by him to the Institute.

To W. Cooke & Son, Baltimore, September 11, 1843: Requesting them to forward the above boxes and the bills of expenses.

To Hon. W. C. Preston, South Carolina, October 17, 1843: Enclosing a letter from Hon. Mr. Spencer, respecting the meeting in April, 1844.

To J. P. Bethell, M. D., Philadelphia, November 3, 1843: Acknowledging letter, and sending a coin of 1783.

Letters and Communications.

From Pierre de Tchihatcheff, St. Petersburg, January $\frac{14}{26}$, 1843: Presenting a very valuable industrial map of European Russia; also,

a work by himself on the geology of the Southern Provinces of Naples, &c.

From Professor Fischer, Imperial Botanic Garden, St. Petersburg, May $\frac{3}{15}$, 1843: Presenting seeds, and two pamphlets containing lists of new plants found by Dr. Schrenk, travelling collector of the Imperial Garden, in the country of the Kirghees, &c.

From Charles de Screibers, M. D., Aulic Councillor, Director of the Royal Cabinet of Natural History, Vienna, May 28, 1843: Thanking the Institute for conferring membership upon him, and presenting two specimens of a very rare animal, through the Austrian Legation.

From Dr. Guyetant, &c., Paris, July 14, 1843: Presenting a work of which he is the author, and referring to his collection of plants, formerly offered through Mr. Walsh to the Institute.

From H. Ledyard, U. S. Chargé d'Affaires, Paris, August 1, 1843.

From R. W. Fox, U. S. Consul, Falmouth, August 3, 1843.

From D. C. Croxall, U. S. Consul, Marseilles, August 5, 1843: Enclosing a letter from Monsieur Dan. Groux, an antiquary, offering for sale a large and valuable collection of coins, medals, &c.

From Daniel Jenifer, American Minister, Vienna, August 8, 1843.

From Wm. Boulware, Chargé d'Affaires, U. S., Naples, August 15, 1843: Describing Persico's statues intended for the Capitol, &c.

From H. Wheaton, American Minister, Berlin, August 15, 1843: Life and writings of Diderot, the Coryphæus of the French encyclopedists, &c.

From Lord Brougham, London, August 21, 1843.

From C. Cushing, Minister to China, steamship Missouri, August 21, 1843: Describing the Azores, &c.

From W. W. Irwin, Chargé, &c., Copenhagen, August 28, 1843: Stating that Mr. Lay, our Chargé at Stockholm, had placed in his hands for the Institute some curious Swedish coins, which he has handed to W. Gordon Reed, of Boston, by whom they will be sent to Washington.

From H. W. Hilliard, Chargé, &c., Brussels, August 28, 1843: Describing the Hotel de Ville, the theatre of the abdication of Charles V.

From Lemuel Wells, U. S. Consul, St. Catherine, Brazil, September 1, 1843: Has received the Secretary's letter, thanking him for the valuable present he made, and has read the second bulletin with pleasure; and stating that the gentleman who collected the birds, &c., is now engaged in collecting quadrupeds and reptiles, and he hopes to be able to procure them for the Institute.

From M. C. Jones, (to Hon. Secretary of War,) Bethlehem, Pennsylvania, September 1, 1843: Repeating the wish of the Young Men's Missionary Society to obtain some of the curiosities of the National Institute.

From C. Cushing, American Minister to China, Gibraltar, September 6, 1843: Describing Gibraltar, &c.

From George E. Chase, Pensacola, September 8, 1843: Describing a remarkable meteorological phenomenon.

From S. M. E. Goheen, Columbia, Pennsylvania, September 9, 1843: Enclosing list of contents of three boxes of African curiosities, presented by him to the Institute.

From W. Cooke & Son, Baltimore, September 11, 1843: Have shipped three boxes mentioned in Secretary's letter, and have charged Secretary with expenses.

From John Parrott, U. S. Consul, Mazatlan, September 13, 1843: Enclosing list of specimens of gold, silver, &c., contained in two boxes presented by him to the Institute.

From H. Wheaton, American Minister, Berlin, September 14, 1843: On the revival of Greek tragedy in Prussia.

From Washington Barrow, Chargé d'Affaires, U. S., Lisbon, September 15, 1843.

From A. H. Palmer, American and Foreign Agency, New York, September 15, 1843.

From Dr. Thomas Sewall, (of Washington,) Edinburg, September 18, 1843: Stating that he will bring home with him various letters and presents; mentioning improvements in medical science, from the microscope, and that Sir Wm. Cooper, of the Royal Botanic Gardens at Kew, proposes to send specimens to the Institute.

From H. Ledyard, Chargé, &c., Paris, September 19, 1843: Enclosing letter from M. Jullien de Paris; giving the names of societies, and a copy of a letter from M. de Tschann, Swiss Chargé d'Affaires, enclosing a list of the principal Swiss Societies; recommending the latter gentleman as a member, and stating that M. Villemain, Minister of Public Instruction, has placed in his care some valuable works for the Institute.

From Lieut. G. F. Emmons, U. S. Navy, Washington, September 20, 1843.

From Capt. H. H. Cocke, U. S. Navy, ship St. Louis, (to Mr. Greenhow,) Rio Janeiro, September 20, 1843: Stating that he has sent by a Baltimore vessel, for the Institute, a collection of Brazilian birds.

From Capt. E. B. Babbitt, Assistant Quartermaster, Hancock Barracks, Maine, September 21, 1843.

From James B. Murray, New York, September 21, 1843: Enclosing letter from Mr. Railton, architect of the Nelson monument, (presenting to the Institute a model, &c., of that work,) and adding that the three boxes have been received by him, and forwarded to the Secretary of State.

From the same, September 22, 1843: Enclosing bill of lading for three boxes containing the model of the Nelson monument, directed to the Secretary of State, which have been shipped in the packet.

From P. A. Browne, Philadelphia, September 23, 1843.

From Dr. Robert J. Graves, Dublin, Ireland, September 25, 1843: Stating that he has sent to the Institute, by Dr. Sewall, a copy of his late work on clinical medicine.

From C. Cushing, American Minister to China, Suez, September 25, 1843: On the peculiar geology, mineralogy, and physical character of the Maltese Islands, &c.

From David Rogers, U. S. Consul, St. Croix, September 25, 1843.

From B. Mayer, (to Mr. Upshur,) Baltimore, September 27, 1843: Forwarding four boxes from Mexico, which he asks the Secretary of State to present to the Institute.

From W. B. Hodgson, (of Savannah,) New York, September 29, 1843: Enclosing a paper by himself on the ethnography of Central Africa, which he has printed, but will not circulate till it has been published by the Institute.

From W. Byrd Powell, Little Rock, Arkansas, September 29, 1843: Asking duplicate letter of appointment as a member of the Institute, the original having been lost; has a collection of bird-skins, quadrupeds, and geological specimens, for the Institute; also, a large fossil skeleton, weighing five hundred pounds, which he thinks is teleosaurus, and which he will perhaps send to the Institute, if expenses will be paid, &c.

From T. A. Conrad, Philadelphia, September, 1843: Inquiring about the Florida shells collected by him, &c.

From Chev. Lorenzo Blanco, (in Latin,) Naples, September, 1843: Presenting his acknowledgments for the manner in which his former letters and presents were received, and sending others.

From Francis B. Mayer, Baltimore, October 1, 1843: Presenting two packages continental money, &c.

From Dr. W. Arnold, Kingston, Jamaica, October 2, 1843: Acknowledging his appointment as a member, and the bulletins, which he has read with pleasure; and will forward to the Institute, from time to time, collections in natural history, &c.

From Robert M. Harrison, U. S. Consul, Kingston, Jamaica, October 5, 1843.

From P. A. Browne, Philadelphia, October 6, 1843: Asking for Mr. Nicollet's report, &c.

From John B. Murray, New York, October 6, 1843.

From George Moore, U. S. Consul, Trieste, October 7, 1843: Referring to a box of shells forwarded by him on a former occasion, and stating that Mr. Tommasini, an eminent botanist, had prepared a box of four or five hundred specimens, which he would send to the Institute, per ship Azelia, bound to New York.

From Thomas Balch, New York, October 9, 1843: Has received various documents, and will do all in his power to aid the Institute.

From Rev. R. R. Gurley, New York, October 12, 1843: In-

quiring about the appointment of John R. Peters, of the American mission to China.

From J. N. Almonte, Mexican Minister, Washington, October 12, 1843.

From E. Gilman, Washington, October 14, 1843.

From James B. Murray, New York, October 14, 1843: Has sent to Mr. Railton a copy of the paper containing his letter, &c., &c.

From Henry Wheaton, American Minister, Berlin, October 15, 1843: On the history of the reformation in Germany, by Professor Ranke, &c.

From Capt. E. Babbitt, U. S. Army, Hancock Barracks, October 19, 1843.

From Col. J. J. Abert, U. S. Topographical Engineers, Washington, October 22, 1843: Communicating a letter from Professor Locke, dated Cincinnati, October 16, desiring him to state to the Institute that he believes he has discovered what is probably the place of maximum intensity of terrestrial magnetism, &c.

From Thomas Balch, New York, October 23, 1843: Acknowledging receipt of various documents, &c., and stating that he has made arrangements for publishing weekly notices of the Institute, for which he wishes to be furnished with materials, &c.

From George Moore, U. S. Consul, Trieste, October 23, 1843: Enclosing receipt for a box of plants, sent by the ship Azelia, for New York, referred to in a former letter.

From Dr. J. H. Causten, Jr., Washington, October 23, 1843: Presenting, in the name of Dr. Ryder, of Georgetown College, two volumes to the Institute.

From H. Peake, Hannibal, Mo., October 25, 1843: Transmitting engraved impressions of certain brass plates, found in an ancient mound near Kinderhook, Illinois, covered with hieroglyphics, which he supposes will throw light on the ancient population of America.

From John Carroll Walsh, Harford County, Maryland, October 26, 1843.

From D. Ruggles, Detroit, Michigan, October 27, 1843: Recommending Dr. Louis Cavalli, of Detroit, as a corresponding member, and transmitting a catalogue of the ornithological cabinet of Mr. Cavalli.

From A. H. Palmer, American and Foreign Agency, New York, November 1, 1843: Offering to transmit books, &c., to Prince Momfanoi of Siam, for the Institute.

From Fielding Lucas, Baltimore, November 2, 1843.

From Rev. Joseph Carberry, St. Inigoes, Maryland, November 2, 1843: Presenting several curiosities, &c.

From J. G. Flügel, U. S. Consul, Leipsic, November 10, 1843.

From Basil Manly, Jr., Corresponding Secretary, Philomathic Society, University of Alabama, Tuscaloosa, November 12, 1843:

Transmitting replies to the circular of the Medical Department of the Institute.

From Capt. P. St. George Cooke, U. S. Dragoons, Fort Leavenworth, November 13, 1843: On the buffalo-grass of the prairies, in continuation of a former letter, and stating that he will forward an elk, if it would be acceptable.

From Joseph Tuley, Millwood, Virginia, November 14, 1843: Presenting a perfect skin of a fine buck elk, killed in his park, &c.

From R. R. Waldron, Purser U. S. N., Boston, November 17, 1843: Enclosing sixteen dollars, received by him on the sale of copies of Wilkes' Synopsis, published by the Institute.

From Charles Rhind, late U. S. Commissioner to Turkey, New York, November 17, 1843: Transmitting by the Hon. H. Fish, of New York, for the Institute, a collection of very rare Turkish coins, of which he encloses a list, &c.

From Charles De Selding, Washington, November 17, 1843: Informing Secretary that if he will send to his house a person, and the means of packing and conveying them, he will deliver to him for the Institute, a number, say one hundred specimens, of crustacea and fish, collected by himself in Brazil and China, many of them very rare.

From Timothy Upsham, Navy Agent, Portsmouth, New Hampshire, November 22, 1843: Stating that D. Deshon has shipped from Boston, a box brought by Captain Spalding, of ship Sir Isaac Newton, from Gibraltar, (from Mr. Cushing.)

From William Brown, M. D., Fredericksburg, Va., November 25, 1843: Presenting the cranium and hands of an ourang outang, of Africa, and other curiosities, sent him by Rev. Thomas S. Savage, M. D., of Cape Palmas, whose letter describing them he encloses.

From James Philips, Jr., (to Mr. Ellsworth,) Boston, November 25, 1843: Offering a collection of East India shells for sale.

From Rev. Samuel Farmar Jarvis, Middletown, Conn., November 25, 1843: Acknowledging membership, with thanks, and, being about to sail for Europe, will be happy to aid the Institute while abroad.

From Hon. W. B. Maclay, New York, November 29, 1843.

From C. M. Wheatley, New York, November 29, 1843.

From Samuel L. Dana, Lowell, Massachussetts, November 29, 1843.

From Hon. J. M. Porter, Secretary of War, Washington, November 30, 1843: Presenting to the Institute two Indian pictures, and the five last numbers of the Indian portraits, and other contributions.

From Hon. M. E. Manly, Newbern, N. C., December 2, 1843: Acknowledging membership, with thanks, and will be happy to send specimens of the minerals of North Carolina, if they will be acceptable, to the Institute.

From Rev. F. Wayland, President of Brown University, Providence, R. I., December 4, 1843.

From Dr. J. P. Bethell, Philadelphia, December 5, 1843.

From Hon. John J. Hardin, of Illinois, House of Representatives, December 7, 1843: Enclosing copy of an inscription from certain brass plates, found in a mound at Kinderhook, Pike County, Illinois, with remarks upon the discovery of them, &c.

From Dr. Thomas Sewall, Washington, December 9, 1843: Describing the steps he took in his late travels in Europe to promote the objects of the National Institute, and enclosing a list of books, &c., presented through him to the Institute.

Special Meeting, December 28, 1843.

The Vice President stated that the object of the meeting was to obtain the concurrence of the Institute in certain recent proceedings of the Board of Management, at a meeting held by the Board, on the 23d inst., at the office of the Secretary of State.

The Recording Secretary read the proceedings referred to, which are as follow:

Preamble, by the Hon. Joseph R. Ingersoll, Secretary of the Meeting.

The early growth of the "National Institute for the Promotion of Science" has been remarkable, both in degree and character. While it has gathered around it an interest which is not confined to the immediate place of its establishment, or even to the country which it is destined hereafter to adorn, it is indebted thus far to individual favor alone for its support and advancement. It will readily be perceived how inadequate to these objects are its precarious resources. The very liberality which in continual bounty provides for it objects which are adapted to its character and are well calculated in themselves to promote its usefulness, becomes a burden when means are wanting to give to the fruits of benevolence a reception and display corresponding with their variety and value. A monthly record of contributions reflects honor upon the kindness and public spirit of the donors, whose numbers are daily increasing, and whose good will knows no bounds. But the proofs of their taste and kind feeling are imperfectly provided for, and sometimes altogether neglected, from the narrow fortunes of the infant establishment. There is no ascertained place of permanent or even secure deposit. There is no fund from which supplies, in any degree proportioned to daily necessities, can be derived. A few voluntary contributors to a precarious and inadequate treasury, have furnished, as they might be able, a portion of the expenses which are required, and have, in many instances, received into their care, for the moment, objects of interest which could not be provided for elsewhere.

With such disadvantages as have been adverted to, the experiment has been fairly made. It never was expected that a National Establishment could subsist upon individual bounty alone. When it shall have derived dignity and confidence from the permanent encouragement of the Congress of the United States, it may well be hoped that private munificence will frequently pour out its stores, and that a laudable pride will be felt in mingling personal associations and favors with the steady support contributed by the Government. A period has now arrived, when legislative assistance may be expected without arrogance, and sought without presumption. They who hoped to behold, in the fullness of time, an institution of rich endowment and established utility, were perfectly willing to incur all the hazards of the experiment. Having done so, not without occasional effort, and even loss, they embrace the occasion of appealing at once to the sympathies of the public and the patronage of the Government.

This body, at first the cherished hope of a small number of persons at the seat of the General Government, and soon to become the expanded reality of national

pride and usefulness, is already an object of attention in distant parts of the world. As yet altogether unendowed by public bounty, it is, nevertheless, the possessor of much that is precious in art, literature, and science. The nation itself is comparatively young in years and in the career of accomplishment. Yet, in various places, it witnesses the matured growth of establishments that emulate the merits, and hope to rival the fame of time-honored institutions in the European world. Scarcely a populous neighborhood is without its praiseworthy ambition to distinguish itself as the abode of letters, or the source of useful instruction. A hundred colleges are planted throughout the land. Many of them, assuming the name and exercising the functions of universities, afford opportunities for education the most varied and complete. Associations already numerous, and constantly increasing, have been formed, and are flourishing, not only with a view to a practical encouragement of the mechanic arts, but to profound researches into the mysteries of nature and art, and a development of them for the purposes of science, and the elegancies of life.

While these happy indications of an improved and vigorous age have been discernible, and have kept pace with its gigantic march, a great central institution of congenial character has been wanting, which, harmonizing with existing establishments in the promotion of the ordinary aims of learning, might possess properties and uses peculiar to itself. The Government of the United States, having, with regard to foreign nations, the attributes of other sovereignties, is limited and accurately defined in the sphere of its domestic influences. Without special legislation it does not become a patron of the arts, or a direct promoter of science and letters. No national museum, no classic louvre, no richly adorned vatican, no commemorative walhalla, rise up and flourish here at the mere pleasure of a prince. Yet, in their essential attributes, such establishments may become trophies as glorious, sources of light and knowledge as prolific and profitable, monuments as well adapted to the fame and honor, to the benefit and instruction of a republic, as those splendid works of British, French, Italian, or Bavarian munificence. The difference under different kinds of Government being that, in one, the monarch commands and the work is executed; in another, the people originate, and the national authority confirms.

Though yet of recent birth, the "National Institute" has been long enough in existence to give entire confidence to the hopes of those who designed it, and practically to exhibit some of the various uses in which it may excel. Qualities and attractions have been proved to belong to it, which establishments otherwise organized and connected could scarcely possess. The political and diplomatic agencies of the Government, whether in foreign lands, or in the remote yet domestic regions of our own country, or in the heart and centre of its long-settled districts, furnish opportunities for obtaining matter of curious interest and valuable instruction. This would find no becoming place in the organized department or bureau, and yet would occasion deep regret if it were left unnoticed or doomed to perish. Its abiding place is found in an institution which, fostered by the Government, is yet distinct from it; which, deriving existence from individual enterprise, may be chiefly supported by national expenditure.

In the most generous rivalships of local associations, jealousies may arise to mar their happy intercourse. These would scarcely exist towards a common coadjutor, which, possessing a general resemblance, would yet be essentially different from themselves. Between bodies so related to each other, an interchange of good offices might be constant without danger to their respective interests. An institution represented, as it were, throughout the civilized world, may become possessed of much, which it may distribute without a sensible diminution of its stores. It could receive in return, and with reciprocal benefit, productions of local and domestic origin, either for its own enjoyment, if it should not already possess them, or for renewed dissemination through the Government agencies abroad. In the circle of curious and interesting matter, whether of nature or art, whether literary or scientific, there is scarcely a class of objects that may not be profitably and acceptably interchanged. From the organic remains of by-gone vegetable and animal existence, to the living productions, the natural history and the botany of the present day; from the rude specimens of the manufactures of half-civilized regions to the richest products of highly cultivated skill; from the simplest improvement in mechanics to the highly wrought effusions of the educated and accomplished mind—every thing that sheds light upon the past condition of the earth, and its successive changes and inhabitants, upon the course of civilization and the development of

human intellect, may be exchanged with mutual advantage. In this work of reciprocal benefit and delight, to the extent, variety, permanence, and frequency of which a limit cannot easily be set, the Institute is calculated particularly to excel.

All the interests of the country will turn with pride towards a spot which shall identify with each of them the metropolis of the nation. The seat of political duty is necessarily there. Why should not the seat of learning and the arts be there also? These are benign and pacific influences. Aloof from the exercise of power, this institution will, in unobtrusive perseverance cultivate and encourage them. In the performance of its not ignoble task, it may afford one additional incentive for confidence in the permanence of a happy union, like that reliance which cheered the latter hours of Washington. The city which bears his name may be distinguished for the promotion of the liberal arts, as well as for the exercise of legislative wisdom.

Nor can the most fervent advocate of rights which were reserved in the formation of the Government, take alarm at the principles on which the Institute is founded. Adhering in letter to the constitution, it has sought its abiding place on the spot where there is no other than federal legislation, a spot which is entitled to its exclusive exercise. The people of this District have no peculiar representation. Their interests, their municipal honor, and their prosperity as a community, are thrown upon the care of the nation. May not the welcome duty be discharged which shall render them a dignified and enlightened society? This city may become a chosen region of the arts—a recipient of the productions of nature from throughout her vast domain—a home for science—a residence for literature—a theatre in which the simplest manners and the least artificial institutions will be found more than compatible with accomplishment in its most varied forms. The National Institute will be the ark in which philosophy and the fine arts shall dwell together; and the genius of liberty shall spread her wings around it, that it may be preserved for ages.

A charter was granted by act of Congress, approved July 27, 1842. The Institute is thus identified with the nation and its legislature. It is, however, without certain funds or permanent support. Having fully proved its capacity for useful existence, if properly sustained, it will seek for more certain reliance than any which it has heretofore depended on, at the hands of Congress. With a view to this object, and others of less vital character, a meeting of the Board of Management was called at the office of the Secretary of State, who is, *ex-officio*, a director on the part of the Government. The meeting took place on the 23d of December, and was attended by a considerable number of gentlemen in addition to the official board. The subjoined is a formal minute of the proceedings.

BOARD OF MANAGEMENT OF THE NATIONAL INSTITUTE,
Saturday, December 23, 1843.

Meeting of the Board of Management of the National Institute, and other gentlemen whose attendance was invited by the Board, at the Office of the Secretary of State.

The meeting was organized at the suggestion of the Hon. A. P. Upshur, Secretary of State, who moved that the Hon. John Quincy Adams should take the chair, and that Joseph R. Ingersoll should act as Secretary.

These appointments being unanimously agreed to, Mr. Francis Markoe, Jr., the Corresponding Secretary of the Society, and one of the members of the Board of Management, at the request of Mr. Upshur, read certain articles of the constitution and by-laws which relate to the Board of Management.

The Hon. C. J. Ingersoll, being invited by the Hon. Mr. Upshur to state the objects of the meeting, after certain remarks, moved the following resolutions:

Resolved, That the Board of Management of the National Institute deem it expedient and proper to memorialize Congress on the subject of the condition and wants of the Institute.

Resolved, That a committee of five persons be appointed by the Chair to prepare a memorial for this purpose, to be previously submitted to the Board of Management for the sanction and signature of its members.

Resolved, That the memorial be presented to the Senate by the Hon. Mr. Woodbury, and to the House, by the Hon. Mr. Adams.

These resolutions were unanimously adopted.

The Hon. Mr. Upshur then desired that, preparatory to his offer of certain resolutions, two *circulars*, heretofore issued, might be read. They are as follows:

Extract from the Proceedings of the National Institute for the Promotion of Science.

At a stated meeting of the National Institute held on the 13th of June, 1842, the Hon. John C. Spencer, Secretary of War, and one of the Directors of the National Institute on the part of the Government, submitted the following resolution:

Resolved, That the President do appoint a committee of five members to devise and execute such measures as may be most effectual to invite the liberality and public spirit of our countrymen in aid of this Institute, and to obtain contributions in money, property, and such articles as are adapted to its purposes.

Whereupon, the resolution having been adopted, the following members were appointed by the Chair to constitute the committee.

The Hon. John C. Spencer, *Secretary of War, Chairman.*
The Hon. W. C. Preston, *U. S. Senate, South Carolina.*
The Hon. Lewis F. Linn, *U. S. Senate, Missouri.*
The Hon. J. R. Ingersoll, *House of Representatives, Philadelphia.*
The Hon. Abbott Lawrence, *Boston.*

At a subsequent stated meeting held on the 8th of August, the chairman of the above committee, on its behalf, made the following report of its proceedings, with a verbal explanation of the several portions of the report.

The committee appointed to devise and execute such measures as should be deemed expedient to obtain contributions and other aid to the Institute would make an informal report.

They propose making an appeal to the public, by disseminating an account of the Institute, its past efforts, its condition, and its prospects, and an exhibition of the many reasons why it should be sustained and encouraged by the citizens of the United States. In their judgment the best means of doing this will be the publication of the remarks addressed to the Institute by the Hon. Mr. Preston, Senator from South Carolina, on the evening of the 13th of June last.

They also propose to address circulars to prominent individuals in the different States, inviting their co-operation, particularly in receiving and transmitting contributions.

They recommend that the Institute authorize the President and Secretaries to sanction their circulars by their official signatures.

They propose that a meeting of the learned men of our country, distinguished for their attainments in the different sciences, particularly in those termed physical, should be held annually at the seat of the General Government, at some early period of the session of Congress, under the auspices of the Institute, to communicate the results of their inquiries, to compare their observations, and to promote the general interests of science. It has seemed to the committee that this Institute affords an opportunity, which ought not to be neglected, of concentrating the genius and learning of our country at a common centre, from which the beams of intelligence will radiate to gladden and bless the land.

They recommend that, in addition to the powers already conferred, the committee be authorized to make arrangements for such a meeting, at a day as early as may be found practicable, and to invite the attendance of those who may desire to participate in its proceedings.

They think that a system of exchanges of mineral and geological specimens, and perhaps of other articles, with the private and public collections in different parts of the Union, may be established with reciprocal advantage; and that the Museum of this Institute may, by these and other means, be enabled in time to exhibit the various treasures of our different soils; and they would suggest the appointment of a committee to whom this subject should be given specially in charge.

JOHN C. SPENCER, *Chairman.*

Whereupon, at the stated meeting of the Institute, held on the 12th of September, 1842, the foregoing report having been called up for further action, the following resolutions, intended to carry out the views of the committee, as described in their informal report, were submitted by the Hon. Joel R. Poinsett, President of the Institute, and adopted:

Resolved, That the several propositions contained in the informal report presented to the Institute by the committee appointed to devise and execute such measures as may be deemed expedient to obtain contributions and other aid to the Institute, be approved and adopted by the Institute.

Resolved, That the eloquent remarks of the Hon. Mr. Preston, Senator from South Carolina, addressed to the Institute on the 13th of June last, be published and distributed in the manner and for the purposes proposed by the committee.

Resolved, That the circulars proposed to be addressed to prominent individuals by the committee, in order to obtain their aid in receiving and transmitting contributions, be sanctioned by the official signatures of the President and Secretary of the Institute.

Resolved, That the committee be empowered to issue invitations in the name of the Institute, and to make all necessary arrangements for the meeting of the learned men of our country, and of all persons who take an interest in the promotion of science, at the seat of Government, and at such a period of the session of Congress as the committee may deem expedient for the purposes suggested by them in their report.

Resolved, That, for the purpose of carrying into effect the recommendation of the committee on this subject, the system proposed in the provisional report of the committee on exchanges be adopted.

True extracts from the minutes:

GARRETT R. BARRY, *Recording Secretary.*

Circular No. 1, dated October 15, 1842, and signed by J. C. Spencer, *Chairman*, Wm. C. Preston, Lewis F. Linn, Joseph R. Ingersoll, Abbott Lawrence, *Committee;* and circular No. 2, dated February 24, 1843, and signed by J. C. Spencer, *Chairman*, were read.

The reading of the circulars having been concluded, Mr. Upshur proposed the following resolutions:

Resolved, That the committee of five members, appointed in June, 1842, "to devise and execute such measures as may be most effectual to invite the liberality and public spirit of our countrymen in aid of the National Institute; and to obtain contributions in money, property, and such articles as are adapted to its purposes," be requested:

1st. To appoint a member to supply the place of the late Hon. Dr. Linn, Senator from Missouri, deceased.

2d. To add three more members to the committee.

3d. To prepare a third circular, in which an appeal shall be made to the liberality of the public.

4th. To announce that the Hon. Mr. Adams has consented to deliver, at some future time, of which notice will be given, the annual discourse before the Institute; and that the Hon. Mr. Walker has consented to deliver the address at the opening of the meeting called by the circular of the committee on the first Monday of April, 1844.

5th. To make definitive arrangements for the details of the contemplated meeting of April next, and to see that they be fully carried into effect.

And they were unanimously agreed to.

The chairman appointed the following persons a committee to prepare the memorial to Congress: Mr. Richard S. Coxe, Mr. Peter Force, Col. J. J. Abert, Mr. A. O. Dayton, Mr. Francis Markoe, Jr.

The Hon. Mr. Woodbury made the following remarks:

Mr. Woodbury observed that he should accept the honor conferred on him of presenting the memorial to the Senate for relief to the Institute. He should do this, and support the measure, if necessary, for one or two reasons, which might have an influence with some in its favor, who, like him, would otherwise entertain doubts as to its being constitutional. The committee just appointed to draft the memorial might also deem it expedient, among other things, to state in it, and thus bring early to the attention of Congress, such views as were calculated to obviate any constitutional objection to relief; and hence he craved their indulgence, as well as that of the other gentlemen present, for detaining them a single moment with stating those reasons. The first one which had operated on him was, that the Institute was situated in the District of Columbia, over which Congress possessed the power of exclusive legislation; a power much less limited in character than

which it possessed over the States. On this account chiefly, though a strict constructionist, like his friend on the left, (Mr. C. I. Ingersoll,) he had felt justified in voting to incoporate the Institute. But there was another strong, if not stronger consideration, which seemed to him to justify, not only the act of incorporation, but for an appropriation for the aid to be asked in the proposed memorial. It was this. The Institute was a public body, and, among other things, engaged in the care of certain articles of public property; and, what most gentlemen might not be aware of, the aid requested was towards defraying the expense incurred by this care. The expense consisted chiefly of postages on correspondence in relation to those articles, and of the freight and due preservation of them. He said those articles were public property, and the Institute a public body; because, so far from being a private enterprise, or its labor devoted to private objects, or the right of its members to the collections under its charge being of a private character, it was public throughout, and the legal interest in the whole was, by the charter, expressly reserved to the United States. Such he knew was the intention of its founders, and he believed it had been fully carried out in the act of incorporation.

There is nothing belonging to its individual members which can be inherited by heirs, transferred to creditors, or sold or assigned to purchasers, as in case of corporations for banks, bridges, insurance, manufacturing, &c.

Care was taken originally to make the Institute different from all other chartered bodies, even in this District, so as to elevate it above every motive of personal gain, dedicating its labors exclusively to objects of a public character, and vesting all the property possessed for this purpose in the Government itself; and thus, by rendering it *national* in substance, as well as name, to obviate any constitutional objection which might arise against measures in its behalf.

When the community or Congress advert to these circumstances, it will at once be seen how broad a distinction exists between assistance to such a body and one of a private character, and where the members possess a private pecuniary interest.

Let gentlemen understand, then, that it is not the liberal object of encouragement to science and literature which animates many of the members of the Institute, and has induced them to incur such personal labor and sacrifices for increasing its collections, nor the active interest excited in their behalf in many of the civilized portions of both hemispheres, which, in my view, renders it strictly constitutional, as well as proper for the Government to aid in defraying the small expense incurred in making and preserving these collections; but it is that the legal interest in the whole of them belongs by the charter to the General Government itself, and, consequently, the whole are deposited in the public buildings, and are under the substantial control of the officers of that Government. When we add to these considerations the facts that the first articles placed in charge of the Institute were collected from the War, Navy, and State Departments, in some of which trouble and expense had before been incurred in taking care of them, and that many of the additions since are from persons connected with those Departments, and that by law the heads of all the Executive Departments are, *ex-officio*, members of the Institute, and exercise the chief official power over its concerns, it seems reasonable, no less than constitutional, for that Government to assist in the expense of taking care of its own property. It is quite as reasonable as if it all remained where a portion of it was originally, in the exclusive custody of several of the Executive Departments, and quite as honorable as reasonable, when we reflect that all the interference of others with this property, all the services and donations of others connected with it, have been with a view to aid the interests of the Government rather than their own private emolument, and to advance its reputation and usefulness in the cause of science, literature, and the arts, so far as it can be done by the careful collection and preservation of many valuable articles of public property, suited to throw new light on, and promote those great objects.

P. S. In order to render the whole proceedings complete, it is proper to state that the Hon. Mr. Walker has been appointed in the place of the Hon. Dr. Linn, deceased, on the committee of June, 1842; and that the Hon. Mr. Rives, the Hon. Mr. Choate, and Alexander Dallas Bache, Esq., Superintendent of the Coast Survey, have been added to the same committee.

After reading the foregoing proceedings, Col. Abert offered the following resolution:

Resolved, That the proceedings of the meeting of the Board of Management, which took place at the office of the Secretary of State, on the 23d instant, be approved; and that the Board be empowered and requested to take any steps which may be necessary to promote and complete the proposed arrangements.

Which was adopted.

Mr. Richard S. Coxe, after some preliminary remarks, in regard to the loss sustained by the Institute in the death of the Hon. Lewis F. Linn, late U. S. Senator, from the State of Missouri, and one of its most active and efficient members, offered the following resolution, which was unanimously adopted:

Resolved, That the National Institute have received, with sincere regret, the intelligence of the death of our highly esteemed member, the Hon. Lewis F. Linn, Senator from the State of Missouri.

That the Hon. Thomas H. Benton be respectfully requested to prepare a biographical memoir of the deceased, to be deposited among the archives of the Institute.

Stated Meeting, January 8, *in which are incorporated the proceedings of the Stated Meeting of February*, 1844.

The Recording Secretary announced the following donations:

For the Cabinet.

Forty-five specimens of Insects, (many of them but recently described, and all extremely rare,) from near Cape Palmas, Western Africa.—*From Rev. Thomas S. Savage, M. D., of the Protestant Episcopal Mission in Africa.*

CATALOGUE OF INSECTS FROM DR. SAVAGE.

No. 1. Cicindella,
2. Carabus,
3. "
4. Galerita,
5. Lamia ornata,
6. "
7. "
8. Cetonia,
9. " (male and female,)
10. Coryphe guttata, (Olivier,)
11. Cetonia aurata ?
12. " marginata, (male and female.)
13. Platygenia zainca,
No. 14. Ateucus cupreus,
15. Lucanus Savageii, Hope,
16. "
17. "
18. "
19. Dynastes, (male and female,)
20. Sagra, "
21. Goliathus cacicus, "
22. " quadri-maculatus,
23. Calandra palmarum, (male and female.)
24. Orgetes rhinoceros,
25. Dytiscus, (male and female.)
26. Buprestis aurata, "

"Most of these insects were undescribed till they were sent to the Rev. F. W. Hope, President of the London Entomological Society, who has since described and named the new species."

For the Library.

History of Vermont, Natural, Civil, and Statistical, in three parts, with a new map of the State, and two hundred engravings, 1 vol., octavo, by Zadock Thompson.—*From the Author, by the hands of the Hon. G. P. Marsh, House of Representatives.*

Remarks on Tides, and the prevailing currents of the Ocean and Atmosphere, pamphlet, by W. C. Redfield.—*From John Varden.*

Description of an African Beetle, allied to Scarabæus Polyphemus, with remarks upon some other Insects of the same group, pamphlet, by Thaddeus Wm. Harris, M. D., Librarian of Harvard College, Massachusetts.—*From Rev. T. S. Savage, M. D., Protestant Episcopal Missionary to Africa.*

Dr. M. C. Buck made a report from the Medical Department.

The Corresponding Secretary announced the following donations and deposites:

For the Cabinet.

Fossil, from the Rocky Mountains, January 23, 1844; Lead Ore, and Crystals, from the Rapids of the Mississippi River, near Warsaw.—*From David Myerle.*

American Water Rotted Hemp, by Mrs. Isaacs, of Salina County, Missouri.—*From Mrs. Isaacs.*

Box, containing a series of Ichthyolites, and an Antique Etruscan Cup, from Milan.—*From Thomas Lloyd Halsey.*

Box, containing Headstone of a Janisary's Tomb, with inscription upon it, taken from a Cemetery at Constantinople.—*From Dr. Boyd Reilly.*

Box, containing a Portrait of Abd-ul-Medjid-Khan, the present Sultan of Turkey.—*From George A. Porter, U. S. Consul at Constantinople.*

Box, containing specimens of all the varieties of Malta and Gizo Marbles, Pamphlets, &c.—*From W. W. Andrews, U. S. Consul at Malta.*

Petrified Wood, from the petrified forest near Cairo, in Egypt; Shield and Powder Flask taken from an Arab Chief, who was killed by an English officer at the capture of Aden, by the hands of Consul Andrews.—*From Capt. Levick, Fifty-Ninth Regiment.*

Box of Dried Plants, from the Equator.—*From General Isidrio Barriga, Quito.*

Box, containing Scales of the Alligator Gar; Skin of a Purple Squirrel, (nondescript.)—*From Major E. G. W. Butler, Dumboyne Plantations, Louisiana.*

Specimens of Tobacco of Lynchburg, Virginia, prepared in two different ways.—*From Judge H. W. Garland, Virginia.*

Box of Minerals, &c.—*From Wm. Oland Bourne, Brooklyn, Long Island.*

Forty-five Roman Coins, (forty-four silver, one bronze;) fifteen mixed Coins, (fourteen silver, one bronze;) two Alexander Coins, (silver;) nine Corinthian Coins, (silver;) eight Greek Coins, (silver;) seven Egyptian Coins, Ptolemies, (one silver, six bronze.) —*From Gouverneur Paulding, New York.*

Box, Copper Ores of Jamaica.—*From Robert M. Harrison, United States Consul, Jamaica.*

Box, from Gibraltar, containing part of the Machinery of the Steamer Missouri, in a semi-fused condition.—*From Hon. C. Cushing, Minister to China.*

Box, Brazilian Birds.—*From Capt. H. H. Cocke, U. S. Navy.*

Box, containing one hundred and seventy-six small Coins, of the middle age, chiefly from Norway, of fifty-six different Stamps, and many duplicates to enable the Institute to exchange, from the Numophylacium of the University of which he is Professor.—*From Professor C. A. Holmboe, Christiania, Norway.*

For the Library.

Statistical Works of M. César Moreau, Paris.—*From the Author.*

Pamphlets, &c.—*From W. W. Andrews, United States Consul, Malta.*

Transactions of the Royal Scottish Society of Arts, vol. 2, part 3; Edinburg, 1843.—*From the Society.*

Report on the Machine at the Trevasean Mine, for ascent and descent of Miners; Purport of a paper relative to Springs of Water, by R. W. Fox, U. S. Consul, Falmouth; Report Linnæan Society of New England, respecting a large marine animal, supposed to be a Serpent, seen near Cape Ann, Massachusetts, in August, 1817.—*From L. H. Sheldon.*

Report on Steam Navigation in the Pacific, with an account of the Coal Mines of Chile and Panama, &c., &c., by William Wheelright; London, 1843.—*From the Author.*

One Trunk, Case, Package, containing Books, &c., forwarded by Henry Ledyard, U. S. Chargé d'Affaires, France.—*From Alexandre Vattemare.*

Mécanique Céleste, of La Place, translated, with a Commentary, by N. Bowditch, and a Memoir of the Translator, by his Son, 4 vols., quarto.—*From Hon. Abbott Lawrence, Boston.*

Description of an African Beetle, allied to Scarabæus Polyphemus, with remarks on other Insects of the same group, by T. W. Harris, M. D., Librarian Harvard University.—*From Rev. Thomas S. Savage, M. D.*

Opere dell' abate Teodoro Monticelli, (Perpetual Secretary of the Royal Academy of Sciences of Naples;) Napoli, 1841, 2 vols., quarto.—Appendice al Prodromo della Mineralogia Vesuviana, di

Monticelli e Covelli; Napoli,1839.—Discorso, Pronunziato Presso al Feretro del Conte di Camaldoli, &c.; Napoli, 1842.—*From Signor Monticelli.*

Reliquiæ Baldwinianæ, compiled by Wm. Darlington, M. D., 1843.—*From the Compiler.*

Circular of the Copper Mining Company of Jamaica.—*From R. M. Harrison, United States Consul.*

Twelve Volumes Annals of the University and Schools of Norway, by Professor C. A. Holmboe.—Descriptio Ornamentorum Maximam Partem Aureorum et Numorum Sæculi VIIIvi et IXni, &c., &c., by the same, 1835.—Solennia Academica in Memoriam Sacrorum per Lutherum Reformatorum, ab Universitate Regia Fredericiana, &c., by the same, 1836.—Diem Natalem Augustissimi Regis Caroli Johannis, ab Universitate, &c., &c., by the same, 1837.—De Prisca Re Monetaria Norwegiæ, by the same, 1841.—*From Professor C. A. Holmboe, Christiania, Norway.*

The Inquirer, No. 3, vol. 1, Correspondence between Dr. T. Hun- and E. C. Delavan, relative to Dr. Sewall's drawings of the human Stomach, &c., &c., &c., December, 1843.—Address of Rev. E. Jennings, on the 60th Anniversary of 4th July, 1836.—*From J. Porter, Plainfield, Massachusetts.*

Description of new Fossil Shells, from the Tertiary of Petersburg, Virginia, by I. Lea, Philadelphia.—*From the Author.*

Catologo Ornitologico, del Gruppo di Malta; Malta, 1843, by A. Schembri.—*From the Author.*

Account of some new Infusorial Forms discovered in the Fossil Infusoria, from Petersburg, Virginia, by Professor J. W. Bailey.—*From the Author.*

Fifth Annual Report of the Ohio Lunatic Asylum, 1843.—*From W. M. Awl, Superintendent.*

Essay on Organic Remains as connected with an ancient tropical region of the earth, by Thomas Gilpin.—*From the Author.*

Seventh Geological Report of Tennessee, by G. Troost.—*From S. H. Laughlin, of Tennessee State Senate.*

Report on some of the most important Hydraulic Works of Holland, by Capt. George W. Hughes, United States Topographical Engineers.—Circles to assist Seamen in the practical application of the theory of Revolving Winds, by Col. W. Reid, Governor of Bermuda.—Four Royal Gazettes of Bermuda, containing Meteorological Tables, by the same.—*From Governor Reid.*

Wiley & Putnam's Register, &c., December, 1843.—*From the Publishers.*

Appleton's Literary Bulletin, January and February, 1844.—*From the Publishers.*

Moore's Register, &c., January and February, 1844.—*From the Publisher.*

Abstract of Correspondence.

Letters—

To Hon. G. M. Bower, House of Representatives, January 13, 1844: In answer to inquiries respecting the communication of H. Peake, of Hannibal, Mo., on the subject of the inscriptions on brass plates found in a Mound at the West.

Letters and Communications

From Domenico Bartolini, Vice Consul at Civita Vecchia, to Hon. Mr. Upshur, Secretary of State, June 1, 1843: Asking the Secretary of State to present to the Institute, in his name, a collection of Etruscan, Greek, and Egyptian vases, &c., of great value.

From Thomas Lloyd Halsey, Milan, July 27, 1843.

From General Isidrio Barriga, Quito, August 9, 1843.

From Seth Sweetzer, U. S. Consul, Guyaquil, September 4, 1843: Enclosing letter from General Barriga, and a box of dried plants from the equator, and adding that he is preparing for a journey into the interior, for the purpose of collecting relics and curiosities of the ancient Incas, which he will forward in 1844 to the Institute.

From M. César Moreau, Paris, September 20, 1843.

From Dr. Thomas Chalmers, Edinburg, October 9, 1843.

From Dr. Boyd Reilly, Constantinople, October 18, 1843.

From George A. Porter, U. S. Consul, Constantinople, October 18, 1843: Apprizing the Secretary that he has put on board the United States brig Truxton a box, containing portrait of Abd-ul-Medjid-Khan, the present Sultan of Turkey, said to be an excellent likeness, and the only one ever sent to the United States.

From Dr. Boyd Reilly, Constantinople, October 26, 1843.

From M. Börkh, Secretary of the Royal Academy of Sciences, Berlin, October 31, 1843: Communicating thanks of the Academy for the first and second bulletins of the Institute.

From W. W. Andrews, U. S. Consul, Malta, November 2, 1843.

From M. Von Raumer, Berlin, November 15, 1843: Expressing his pleasure at being made a member of the Institute, as it appears to give a welcome to his intended visit to America, and making strictures upon travellers who have visited the United States.

From James Tod, Secretary Scotch Royal Society of Arts, Edinburg, November 16, 1843: Transmitting the transactions of the Society.

From C. W. Dabney, U. S. Consul, Fayal, November 20, 1843: Advising the Secretary of his purpose to forward a suite of volcanic specimens, from the Azores, to supply the place of those collected by Mr. Cushing, Minister to China, which were lost in the Missouri; and that he will send on his own collections, if they would be acceptable.

From R. W. Fox, U. S. Consul, Plymouth, England, November 23, 1843.

From Major G. W. Butler, Dumboyne Plantations, Bayou Gould Post office, Louisiana, November 28, 1843.

From Henry G. Andrews, Boston, December 7, 1843.

From L. H. Sheldon, Andover, Massachusetts, December 7, 1843: Applauding the objects of the Institute, and promising to send on to it, from time to time, communications and objects of natural history, &c.

From Dr. Gideon B. Smith, Baltimore, December 10, 1843: Describing and giving a sketch of a simple hygrometer made with vegetable and animal fibre, &c., &c.

From Thomas Balch, New York, December 11, 1843.

From Wm. Oland Bourne, Brooklyn, Long Island, December 11, 1843.

From J. Coppinger, New York, (received December 12, 1843.)

From Robert Walsh, Paris, December 12, 1843: Stating that the French Minister of Commerce had sent to him, for the Institute, the eight quarto volumes of statistics published by his department, and recommending the Minister and others as members, &c.

From P. S. Duponceau, Philadelphia, December 13, 1843.

From Howland & Aspinwall, New York, December 13, 1843.

From H. Ledyard, U. S. Chargé d'Affaires, Paris, December 14, 1843: Apprizing the Institute that he has induced M. Vattemare to send to it three boxes of books, &c., upon which he (Mr. Ledyard) had paid the expenses to Havre.

From H. W. Garland, of Lynchburg, Virginia, Washington, December 18, 1843.

From S. M. E. Goheen, Lebanon, Illinois, December 18, 1843: Acknowledging Secretary's letter, and a copy of the National Intelligencer, containing list of presents made by him to the Institute; has removed to Illinois, and will explore the Indian mounds of that State, and give the results to the Institute.

From J. Dille, Newark, Ohio, December 18, 1843: On the phenomena of drift in the Western country, &c.

From Capt. P. St. George Cooke, U. S. Dragoons, Fort Leavenworth, December 20, 1843.

From Messrs. Zachrisson & Co., New York, December 23, 1843.

From Bronson Murray, Ottawa, Illinois, December 23, 1843.

From Henry Ledyard, Chargé d'Affaires, Paris: Enclosing bill of lading for one trunk, one case, and one package, shipped at Havre on board the Oneida, to New York, for the Institute.

From W. B. Hodgson, Savannah, Georgia, December 28, 1843.

From Francis Lieber, L. L. D., Columbia, South Carolina, December 29, 1843: Expressing his desire to serve the cause of the Institute in his approaching travels in Europe.

From Professor John Locke, Cincinnati, Ohio, December 30,

1843: Enclosing extract of a letter from Col. Edward Sabine, Royal Army, on the subject of Professor Locke's magnetical researches in the vicinity of Lake Superior.

Transportation Bill, New York, December 30, 1843: For a box from South America.

From Rev. John G. Morris, D. D., Baltimore, January 1, 1844.

From J. Dille, Newark, Ohio, January 2, 1844: Communicating notices of certain meteorological phenomena observed by him; wishing to become a member, and offering his services, &c.

From James Lawrence, Boston, January 3, 1844.

From Capt. G. P. Upshur, U. S. Navy, Norfolk, January 4, 1844.

From Hon. Richard Rush, Sydenham, near Philadelphia, January 6, 1844.

From Hon. Abbott Lawrence, Boston, received January 6, 1844.

From Robert Waugh, (to Hon. J. C. Spencer,) Mobile, January 8, 1844.

From Rev. Thomas S. Savage, M. D., Secretary of the Foreign Protestant Episcopal Missions, (Washington,) January 8, 1844: Presenting a valuable collection of beetles of West Africa, with a list and description, and promising to collect objects of interest for the Institute on his return to Africa, &c.

From Dr. T. Purrington, Washington, January 8, 1844.

From John K. Townsend, Washington, January 9, 1844.

From Thos. S. Hinde, Mount Carmel, Illinois, January 10, 1844.

From H. L. Ellsworth, Patent office, Washington, January 12, 1844.

From Rev. C. M. Butler, Georgetown, D. C., January 12, 1844.

From Dr. Robert E. Peyton, The Plains, Fauquier County, Virginia, January 15, 1844: Describing a remarkable case of labor which was at the time of writing under his care, the issue of which he will communicate to the Institute.

From P. P. Mayo, Norfolk, Virginia, January 15, 1844.

From Dr. M. C. Buck, Washington, January 15, 1844.

From Hon. John McP. Berrien, U. S. Senate, January 16, 1844.

From Rev. Professor Edward Hitchcock, Amherst, Massachusetts, January 16, 1844.

From J. Dille, Newark, Ohio, January 20, 1844: Expressing pleasure at having been made a member of the Institute, &c., and suggesting inquiry into the reason why all the great rivers of the globe run eastwardly or southeastwardly, &c.

From Dr. C. Foreman, Washington University, Baltimore, January 22, 1844: Proposing to send to the Institute, at the instance of Dr. Habersham, the whole collection of fossil bones of the megatherium of Georgia, now in his hands, &c.

From Hon. W. P. Thomasson, of Kentucky, House of Representatives, January 22, 1844: Asking copy of constitution and last annual report of the National Institute.

From Wm. Oland Bourne, Brooklyn, Long Island, January 22, 1844: Offering remarks and suggestions respecting the National and Smithsonian Institutes; stating that he has sent on a collection of minerals; and that he will do any thing in his power to serve the Institute, &c.

From Rev. Thomas S. Savage, M. D., Protestant Episcopal Missionary to Cape Palmas, W. Africa, Fredericksburg, Virginia, January 22, 1844.

From Hon. Gov. Kemble, of New York, Washington, January 23, 1844.

From Hugh B. Sweeny, Washington, January 24, 1844.

From W. D. Brackenridge, Washington, January 26, 1844.

From W. Wheelright, London, (received January 28, 1844:) Transmitting his report of steam navigation in the Pacific, and will be happy to be useful to the Institute when he returns to South America.

From R. M. Harrison, U. S. Consul, Kingston, Jamaica, October 31, 1843.

From Rev. John G. Morris, D. D., Baltimore, January 31, 1844.

Rail Road Receipt, January 31, 1844: Accompanying a box from New York.

From Capt. G. P. Upshur, U. S. Navy, Philadelphia, February 3, 1844.

From Howland & Aspinwall, New York, February 6, 1844.

From Alexandre Vattemare, Paris, December 10, 1843: Explaining his system of exchanges as it concerns the National Institute, &c., forwarding a large collection of books, &c., in advance of a still larger collection he has on hand for the Institute, on which he expects expenses paid, &c.; and accompanying his letter with various printed and manuscript documents showing the steps he has been taking to promote exchanges of books, works of art, &c., &c., between France and the United States, &c.

From Professor C. A. Holmboe, Christiania, Norway, October 12, 1843: Expressing his high sense of the honor of membership conferred upon him, and sending various contributions to the library and cabinet of the Institute; proposing, if acceptable, to send on a manuscript copy of his grammar on the language of the Lappons, a nomadic people who dwell in the Northern parts of Sweden, Norway, and Russia, and which appears to be of the same origin as the dialects of the North American Indians; expressing a desire to obtain works on the Indian languages from the United States.

From Major General Tcheffkine, General Russian Mining Engi-

neers, &c., St. Petersburg, November $\frac{13}{25}$, 1843: Transmitting the continuation of the Annuaire of the Journal of Russian Mines, and the Annuaire Magnétique et Météorologique, &c.

OFFICERS OF THE NATIONAL INSTITUTE.

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Col. J. G. Totten, *Chief Engineer Corps.*
Lieut. M. F. Maury, *United States Navy.*
Aaron O. Dayton, Esq., *Fourth Auditor.*

Stated Meeting, May, 1844, *including March and April.*

The Corresponding Secretary announced the following contributions and donations:

For the Cabinet.

A box, containing twelve Jars of Reptiles, &c., collected by himself. —*From N. S. Jarvis, M. D., U. S. A., Fort Jesup.*

Collection of Fossil Bones of Megatherium of Georgia.—*From Dr. Habersham, Savannah.*

Two large boxes, containing Books, Engravings, Medals, &c.—*From Alexandre Vattemare, Paris.*

Box, containing one hundred and thirty-eight Birds; one box containing Minerals, &c.; one box of Plants, in liquor and dried, &c. —*From Dr. G. R. B. Horner, U. S. Navy.*

Collection of Copper Ores, from Warren County, Virginia.—*From Dr. M. C. Buck.*

A bag, containing Skin of a Female Elk, from Virginia.—*From Joseph Tuley, Virginia.*

A box, containing specimens of Tin Ore, &c., &c., and other minerals, seventeen specimens.—*From C. T. Jackson, New Hampshire.*

Package of Continental Money.—*From Thomas Pratt, Philadelphia.*

Conurus carolinensis, four specimens.—*From Major Lewis.*

Package of large and curious Swedish Coins.—*From George W. Lay, U. S. Chargé d'Affaires, Stockholm.*

Mittens made of the Wool of the Buffalo Cow.—*From Capt. Cooke, U. S. Dragoons.*

Medal—Head of Alexandre Vattemare.—*From M. Vattemare.*

Coin, found in the District of Columbia.—*From Captain R. France.*

Box, containing a large and splendid specimen of Septaria, New York State.—*From O. Root, Syracuse, N. Y.*

Box, containing a large Crystal of Salt.—*From Major Wm. Graham, U. S. A.*

Box, containing a complete collection of Dimes and Elam's Prepared Colors for Artists.—*From*

For the Library.

Bulletin de l'Académie Royale des Sciences et de Belles Lettres, de Bruxelles, from July 1842, to July, 1843, inclusive, 13 vols., octavo.—Nouveaux Mémoires de l'Académie Royale, &c, tome XVI, 1843, quarto.—Mémoires Couronnés, et Mémoires des Savants Etrangers, publiés par l'Académie, &c., tome XV, 2me partie, 1841, 1842, octavo.—Sur l'Emploi de la Boussole dans les Mines, par A. Quetelet, Bruxelles, 1843, octavo.—Annuaire de l'Académie Royale, 1843.—Instructions pour l'Observation des Phénomènes Périodiques, par A. Quetelet,

1842.—*From M. Quetelet, Astronomer Royal, and Perpetual Secretary to the Royal Academy of Sciences of Brussels, &c.*

Contributions to the Edingburg Review, by Francis Jeffrey, London, 1844, four volumes, octavo.—*From the Author.*

Literary Sympathies, or Industrial Bookmaking, (an Essay on the History of Recent English Lexicography,) by Dr. J. G. Flügel, U. S. Consul, Leipsic, with a Preface, by Professor Dr. G. Hermann, (in German.)—*From Dr. Flügel.*

Discours de M. le Baron de Stassart, Directeur de l'Académie Royale de Bruxelles, sent to the Institute at the request of the author, by Mr. Hilliard, American Chargé at Brussels.—*From M. le Baron de Stassart.*

Observations on the Epidemic Yellow Fever of Natchez and the Southwest, by John W. Monette, M. D., &c., Louisville, Kentucky, 1842.—*From the Author.*

Pantography, &c., &c., by B. J. Antrim, Philadelphia, 1843, duodecimo.—Atlas of Maps, in illustration of his System of Pantography, folio.—*From the Author.*

Two boxes, containing a large and valuable collection of Books, Engravings, Medals, &c., of which a list is given.—*From Alexandre Vattemare, Paris.*

Engravings, from the Works of Sir Joshua Reynolds, London, folio. The Fine Arts of the English School; Series of Engravings, from Paintings, Sculpture, and Architecture of Eminent English Artists, &c.; London, 1812, folio.—*From David Paul Brown, of Philadelphia, by the hands of Hon. J. R. Ingersoll.*

Report on the Manufacture of Iron, &c., by J. H. Alexander, Topographical Engineer of the State of Maryland, (printed by order of the Senate of Maryland,) Annapolis, 1840, octavo.—Second Report on the same, by the same, 1844.—*From the Author.*

Descriptive Catalogue of a Cabinet of Roman Imperial large Brass Medals, by Capt. W. H. Smith, Royal Navy, &c., &c., Bedford, 1834, quarto.—*From Captain J. H. Aulick, U. S. Navy.*

Commentaries on the Laws of Virginia, by H. St. George Tucker, 2 vols., duodecimo, Winchester, 1836.—Lectures on Constitutional Law, by the same, duodecimo, Richmond, 1843.—Lectures on National Law, by the same, Charlottesville, 1844, duodecimo.—*From the Author.*

An Attempt to Explain the Nature of Electricity, and its Intention in the Economy of the Universe, by Robert S. Wood, Philadelphia, (several copies for distribution.)—*From the Author.*

A Series of Text-Books, (fourteen in number,) for the use of Schools and Colleges, prepared by Major C. Davis, Professor at West Point.—*From the Anthor*

Spark's American Biography, vol. 11, new series, vol. 1, containing Life of Patrick Henry, by A. H. Everett.—*From Mr. Everett.*

Dissertatio Inauguralis, de Vera Judicii Juratorum Origine Natura et

Indole, by Thomas C. Reynolds, L. L. D., of Charleston, published by the Heidelberg Institute.—*From the Author.*

On the Reduction of Iron and Silver Ores, &c., by Lieut. W. W. Mather, Professor at West Point, 1831.—Geology and Mineralogy of New London and Windham counties, Connecticut, by the same, 1834.—First Annual Report of the Geology of Ohio, by the same, 1837.—Second Annual Report, by the same, 1838.—Report on the Geology of Kentucky, 1838, by the same.—Report on the Geology of New York, 1839, by the same.—Geology of New York, 1st District, Albany, 1843, quarto, by the same.—*From the Author.*

Sulla Riforma de' Pesi e delle Misure, &c., di G. C. Grimaldi.—Considerazioni sul Dazio d'Introduzione dei Libri Straniere, by the same.—Itinerario da Napoli a Lecce, &c., 1821, by the same. Considerazioni sulla Pubbliche Opere, 1839, by the same.—Elogio del Conte di Camaldoli, by the same, Naples, 1843 —Versi a Raffaele Petra, by the same, 1833.—Osservazioni sulla Converzione delli Rediti Pubbliche, 1836, by the same.—*From the Author.*

Opere dell' Abate T. Monticelli, 1841, Naples.—*From the Author.*

Atti della Reale Accademia delle Scienze, Naples, vol. 5, part 1, 1843.—*From the Royal Academy.*

Archives du Muséum d'Histoire Naturelle, from vol. 1, 1st livraison, 1839, to vol. 3, livraison 3, 1843, nine volumes, Paris, quarto.—*From the Directors of the Museum.*

De la Puissance Américaine, &c., par G. T. Pouissin, Paris, 1843, 2 vols., octavo.—*From the Author.*

Malta, as a Residence for Invalids, &c., by T. F. Sankey, M. D., Malta, 1843.—*From the Author.*

Transactions of the Society of Arts, &c., vol. 14, London, 1843.—*From the Society.*

Institut Royal de France, Paris, 1843.—*From M. Vattemare.*

Saggi sull' Aerostatica e sull' Aeronautica, by Col. M. A. Costa, Naples, 1837.—Saggio Secondo, by the same.—Complemento, &c., by the same.—Sulla Invenzione del Cannone a Vapore, attribuda ad Archimede, &c., Naples, 1842.—*From the Author.*

Biblioteca di Commercio, &c., di G. Bursotti Napoli, 1842, May and June, 2 vols.—*From the Author.*

Quadro Geographico Ornitologico da Antonio Schembri, Malta, 1843.—*From the Author.*

Revista Ligure, anno primo, tom. 2o, Fascicolo 9o, Genoa, 1844.—*From C. E. Lester, U. S. Consul, Genoa.*

Proceedings of the New York Historical Society, 1843.—*From the Society.*

Leibig's Animal Chemistry.—*From J. H. Causten, Jr., M. D.*

Essay on Solid Meteors and Meteoric Stones, manuscript, inscribed to the National Institute, by P. A. Browne, Philadelphia.—*From the Author.*

The Birds of Long Island, by J. P. Giraud, Jr., New York, 1844.—*From the Author.*

History of the Jewish Physicians, from the French of E. Carmoly, (with notes,) by J. W. Dunbar, M. D., Baltimore.—*From Dr. Dunbar.*

Lecture before the Georgia Historical Society, by S. K. Talmage, President Oglethorpe University, 1844.—*From the Georgia Historical Society.*

Zoological Contributions, by S. S. Haldeman, No. 1, 2, and 3, 1842, 1843, and 1844.—Philadelphia.—Observations on the Troglodites Niger, by Rev. Thomas S. Savage, M. D.—*From the Author.*

Topographical and Geographical Description of Wisconsin, &c., by J. A. Lapham, Milwaukee.—*From the Author.*

On the Collection of Geological Specimens, &c., by C. T. Jackson, M. D., Boston, 1836.—*From Dr. Jackson.*

On the Electric Fluid, &c., &c., by James Glenn, New York, 1844. —*From the Author.*

Twenty-third Annual Report, Mercantile Library Association, 1844, New York.—*From the Society.*

Annual Report, Regent's University, New York, 1844.—*From the Regent's University.*

Proceedings of the American Philosophical Society, vol. 4, Nos. 28 and 29, June, 1843, to April, 1844.—*From the Society.*

Proceedings of the Academy of Natural Sciences, Philadelphia, vol. 2, No. 1, January and February, 1844.—*From the Academy.*

Royal Gazette of Bermuda, containing Meteorological Tables, eight numbers.—*From Governor Reid.*

Address to the Members of the Massachussetts Medical Society.—*From E. Jarvis.*

Appleton's Literary Bulletin, &c., Nos. 10, 11, 12, March, April, and May, 1844.—*From Mr. Appleton.*

J. W. Moore's Literary News Letter, &c., vol. 3, No. 27.—*From Mr. Moore.*

Lithographic Portrait of C. S. Todd, American Minister in Russia.—*From Mr. Todd.*

Abstract of Correspondence.

Letters—

To Mr. Francis Lieber, L. L. D., Columbia, South Carolina, March 8, 1844: Requesting him, as a warm friend and member of the Institute, to represent it in his approaching travels in Europe, and particularly to be present at, and to describe the great national exhibition of arts, industry, &c., at Paris, &c.

To George Baker & Isaac Thurber, Providence, Rhode Island, March 18, 1844.

To Joseph Tuley, Millwood, Virginia, April 20, 1844.

To J. P. Giraud, Jr., New York, April 24, 1844.

To George M. D. Cantrell, Nashville, Tennessee, April 26, 1844.

Letters and Communications.

From H. W. Hilliard, U. S. Chargé d'Affaires, Brussels, September 13, 1843: Transmitting several volumes, from M. Quetelet, of Brussels, Astronomer Royal and Perpetual Secretary of the Academy of Sciences, &c.

From Caleb Cushing, American Minister to China, Suez, October 3, 1843: On the peculiar geographical position and unique physical characteristics of Egypt.

From J. C. Picket, U. S. Chargé d'Affaires, Lima, October 10, 1843: Describing some remarkable ruins in the Province of Chachapoyas, Peru.

From M. Roux, de Rochelle, Paris, October 18, 1843: Referring to the kind reception he met with in the United States, and offering to address to the Institute some literary productions.

From Joseph Balestier, U. S. Consul, Singapore, October 21, 1843: Alluding to the boxes containing collections of objects of natural history shipped by him from Prince Momfanoi, of Siam, &c.

From Capt. Proby Cautley, British Army, Serampore, Bengal, October 30, 1843: Apprizing the Secretary that he has forwarded a collection (a box) of fossils, from the Sivalik Hills, at the Southern foot of the Himelayas, between the Sutledj and the Jumna, which he says he has directed his agents, Messrs. Allen, Paton, & Co., of Calcutta, to deliver at Washington, free of expense.

From Signor Teodoro Monticelli, Perpetual Secretary of the Royal Academy of Sciences, Naples, October 30, 1843: Expressing a wish that the Marquis of Pietra Catella de Giuseppe Ceva Grimaldi, whose works he sends, may be made a member of the Institute; transmitting various volumes; and stating that he has a splendid and unique collection of Vesuvian and other minerals, and that he will be happy to add to the Institute's collections.

From Alexander Hamett, U. S. Consul, Naples, November 4, 1843: Advising Secretary of the books, &c., sent to the Institute, by Signor Monticelli and Signor Bursotti.

From Francis, Lord Jeffrey, Edinburg, November 12, 1843: Expressing a grateful sense of the honor of membership conferred upon him, and offering his services in certain branches of literature and statistics; declaring his friendly sentiments towards the United States, and presenting to the Institute a copy of his late republication.

From H. P. Sturges, U. S. Consul, Manilla, November 27, 1843: Has shipped on board the Ianthe, bound to Boston, a collection of cryptogamous and other plants of North South Wales and New Zealand, for the Institute.

From Frederick Tamnau, Jr., Berlin, Prussia, December 27, 1843: Acknowledging letters, and will be happy to exchange minerals when the Institute is ready, &c.

From John G. Flügel, U. S. Consul, Leipsic, December 27, 1843: Submitting, for the information of the Institute and Congress,

a pamphlet addressed by himself to the literary world, complaining of the piracies committed upon his works, &c.

From Rev. S. G. Bulfinch, to Mr. Force, Washington, December 30, 1843.

From the Royal Scottish Society of Arts, James Tod, Secretary, Edinburg, January 4, 1844: Referring to the various volumes of the transactions of the Society transmitted to the Institute on former occasions, and sending other volumes of the same in continuation, &c.

From N. S. Jarvis, M. D., U. S. Army, to Col. Abert, Fort Jesup, January 22, 1844: Has forwarded a collection of reptiles, &c., made by himself, &c.

From D. Ruggles, Detroit, January 26, 1844: Presenting certain views respecting the endowment of the Smithsonian bequest.

From Capt. P. St. George Cooke, U. S. Dragoons, Fort Leavenworth, February 2, 1844.

From Major W. H. Chase, Pensacola, February 4, 1844.

From C. S. Todd, Envoy Extraordinary and Minister Plenipotentiary, U. S., January 25, (February 6,) 1844.

From Dr. Louis Cavalli, Detroit, February 8, 1844.

From A. Bourne, Wareham, Massachusetts, February 9, 1844.

From E. Curtis, Collector of New York, February 10, 1844: Enclosing bill of lading for three packages, per ship Oneida, which he has forwarded by transportation line; also, bills of freight, &c.

From Joseph Gales, Washington, February 12, 1844.

From Dr. F. A. Davisson, Hillsborough, Loudon County, Virginia, February 13, 1844: Inquires about the Institute, and offers to send to its cabinet minerals, geological specimens, shells, insects, &c.

From Thomas S. Hinds, Mount Carmel, Illinois, February 15, 1844.

From David Myerle, St. Louis, February 15, 1844: On the growth, preparation, and value of hemp in the United States, &c.

From Col. G. Talcott, Washington, February 16, 1844.

From Paul B. Goddard, M. D., Philadelphia, February 17, 1844.

From John M. Marston, U. S. Consul, Palermo, February 17, 1844.

From W. B. Lawrence, New York, February 18, 1844.

From Rev. John G. Morris, D. D., Baltimore, February 19, 1844: On the bad condition of the cabinet of insects deposited in the Institute, by Count Castelnau, &c.

From George E. Chase, Pensacola, February 19, 1844: Suggesting a method by which the National Institute and the British Association might settle the orthography and orthoepy of the English language.

From C. W. Dabney, U. S. Consul, Fayal, February 19, 1844: Will send on his promised collections, free of expense, &c.

From H. W. Hilliard, U. S. Chargé d'Affaires, at Brussels, February 19, 1844: Communicating a copy of Baron Stassart's late discourse before the Academy of Sciences at Brussels, being a coup d'œil of the history of Belgium, of which he gives extracts, &c., &c.

From J. W. Monette, M. D., Washington, Mississippi, February 20, 1844: Enclosing his "Observations on the epidemic yellow fever of Natchez, and the Southwest," &c.

From George Moore, U. S. Consul, Trieste, February 22, 1844.

From B. Jay Antrim, of Philadelphia, Washington, February 23, 1844: Presenting to the Institute a copy of a work on the science of letters, of which he is author.

From L. R. Gibbes, Charleston, South Carolina, February 26, 1844: Proposing to communicate a paper on the tertiaries of South Carolina, and to send presents to the Institute, at its April meeting, if not able to attend himself, &c.

From A. O. Dayton, Washington, February 27, 1844: Announcing that the Secretary of the Navy, Mr. Gilmer, had consented to act as a Director of the Institute.

From Joseph T. Dutton, Brooklyn, New York, March 1, 1844: On the phenomena of the aurora borealis, &c.

From Dr. Wm. Buckland, Geologist, Oxford, England, March 2, 1844.

From William Lawrence, London, March 2, 1844.

From H. J. Rogers, Baltimore, March 3, 1844.

From Capt. P. St. George Cooke, U. S. Dragoons, Fort Leavenworth, March 6, 1844.

From Alexandre Vattemare, Paris, March 6, 1844: Acknowledging Secretary's letter, offering remarks and suggestions respecting the Institute, stating the amount he will need to carry on his operations, and enclosing lists of books he will send by the next packet, &c.

From Dr. E. Foreman, Baltimore, (received March 7, 1844:) Has sent by transportation line the boxes of fossil bones of megatherium, from Dr. Habersham, of Savannah, &c.

From Daniel J. Desmond, Corresponding Secretary, Pennsylvania, Historical Society, Philadelphia, March 7, 1844: Transmitting list of officers and members of the Society.

From P. A. Browne, Philadelphia, March 7, 1844.

From B. J. Antrim, of Philadelphia, March 14, 1844: Presenting a collection of maps illustrating his system of pantography, &c.

From John Marshall, Office Southern Reformer, Jackson, Miss., March 15, 1844: Stating that the citizens of Jackson propose to form an auxiliary Society to be connected with the National Institute, and inquiring what steps they ought to take to effect the object.

From Capt. G. P. Upshur, U. S. Navy, March 15, 1844.

From Hon. Joel R. Poinsett, South Carolina, March 15, 1844: Explaining the reasons which prevented him from preparing a paper for, or being present at the April meeting.

From E. G. Etting & Brothers, Philadelphia, March 15, 1844: Announcing the arrival of a box of books from Naples, and asking orders, &c.

From H. Ledyard, U. S. Chargé d'Affaires, Paris, March 15, 1844: Enclosing copy of M. de Tschann's (Swiss Minister at Paris) letter acknowledging membership, and stating that he has forwarded, via Havre, by the packet Duchesse d'Orleans, two more boxes, containing books, engravings, medals, &c., from M. Vattemare, &c.

From Alexandre Vattemare, Paris, March 16, 1844: Transmitting additional lists of books and copies of letters, which he hopes may be published; describing some of the valuable works sent; proposing, also, various persons as members, &c.

From Caspar Morris, M. D., Philadelphia, March 16, 1844: Acknowledging membership, and will forward specimens of ammonites, from India, if they would be acceptable, &c.

From G. R. B. Horner, M. D., U. S. Navy, Washington, March 16, 1844: Presenting a large number of objects of natural history collected by himself in a late cruise in the Delaware 74.

From J. W. Hardy, Randolph—Macon College, Virginia, March 16, 1844: Hopes the Institute will be endowed; encloses $10, which he may remit annually; details some experiments with ammonia on newspapers, &c.

From Benjamin Hallowell, Sandy Spring, Maryland, March 16, 1844.

From A. D. Chaloner, M. D., Philadelphia, March 18, 1844.

From Gov. Paulding, New York, March 18, 1844.

From Professor George Tucker, University of Virginia, March 18, 1844.

From Lieut. D. Ruggles, U. S. Army, Detroit, March 18, 1844.

From John Varden, Washington, March 19, 1844.

From Professor S. S. Haldeman, Columbia, Pennsylvania, March 22, 1844: Acknowledging membership, and forwarding a paper on the necessity of a National Institute.

From President George Upfold, Pittsburg, Pennsylvania, March 22, 1844.

From David Paul Brown, Philadelphia, March 23, 1844: Will forward certain books of engravings in time for the April meeting, and wishes them considered as but an earnest of what he means to do for the Institute, &c.

From A. Thomas Smith, Chief Clerk Navy Department, Washington, March 24, 1844: Acknowledging letter respecting the antique vases, and has sent it to Com. Nicholson, at Boston.

From Prof. A. Caswell, Brown University, Rhode Island, March 25, 1844.

From S. H. Tyson, Philadelphia, March 26, 1844: Apprizing Secretary that there is in the Custom-house a box for the Institute, which came in the ship Shenandoah.

From J. H. Alexander, Baltimore, March 26, 1844.

From J. B. Murray, New York, March 27, 1844.

From Dr. J. C. Habersham, Savannah, Georgia, March 27, 1844: Respecting the collection of megatherium bones which he sent to the Institute by Mr. Hodgson, &c.

From A. K. Witmer, (to Mr. Wickliffe,) Paradise, Pennsylvania, March 27, 1844: Presenting $5, in the name of the Pararadise Lyceum, towards the expense of publication of proceedings of the late meeting.

From R. Butterfield, M. D., Washington, Mississippi, March 27, 1844: Offering to the Institute, on moderate terms, a collection of fossils, minerals, Indian relics, &c.

From Professor J. W. Hardy, Randolph—Macon College, Virginia, March 28, 1844.

From J. P. Durbin, March 28, 1844.

From Edward Coles, Philadelphia, March 28, 1844.

From Franklin Peale, Chief Coiner, U. S. Mint, to Mr. Spencer, Secretary of the Treasury, Philadelphia, March 28, 1844: Presenting to the Institute a full series of the national medals, forty-nine in number, of which he encloses, with the medals, a catalogue, &c.

List of National Medals presented to the National Institute, by Franklin Peale, Chief Coiner of the Mint of the United States, 1844.

PRESIDENTIAL SERIES.

The dies of this series were constructed for the Department of Indian Affairs. The medals are usually struck in silver.

No. 1, Jefferson; No. 2, Madison; No. 3, Monroe; No. 4, J. Q. Adams; No. 5, Jackson; No. 6, Van Buren; No. 7, Tyler.—Whole number, 7.

Dies of Presidents Washington, John Adams, and Harrison, have not been constructed.

MILITARY SERIES.

Army.—The two first of this series are in honor of Revolutionary services, and were originally struck soon after the close of that war; the remainder in honor of services during the late war.

No. 1, Gates; No. 2, Morgan; No. 3, Scott; No. 4, Miller; No. 5, Gaines; No. 6, Porter; No. 7, Brown; No. 8, Ripley; No. 9, McComb; No. 10, Jackson; No. 11, Shelby; No. 12, Harrison; No. 13, Croghan.—Whole number, 13.

Navy.—All of this series were struck in honor of services during the late war.

No. 1, Hull; No. 2, Jones; No. 3, Decatur; No. 4, Bainbridge; No. 5, Perry; No. 6, Perry's crew; No. 7, Elliott; No. 8, Burrows; No. 9, McCall; No. 10, Lawrence; No. 11, Macdonough; No. 12, Henley; No. 13, Cassin; No. 14, Warrington; No. 15, Blakeley; No. 16, Stewart; No. 17, Biddle.—Whole number, 17.

ELECTROTYPE SERIES.

This series has been copied from medals, the dies of which were constructed in other countries or are lost.

The medal voted to Capt. Stewart has not been recovered.

No. 1, Washington; No. 2, Wayne; No. 3, Fleury; No. 4, Col. Washington; No. 5, Captors of André; No. 6, Howard; No. 7, Green; No. 8, Preble; No. 9, Jones.—Whole number, 9.

ADDITIONAL SERIES.

No. 1, State of Pennsylvania to Perry; No. 2, Inauguration, Van Buren; No. 3, Visit to the Mint, Tyler.—Whole number, 3.

Aggregate number, 49.

From Abbott Lawrence, Boston, March 29, 1844: Contributing $100 towards the expenses of the meeting of the Institute, &c.

From Hon. Richard Rush, Philadelphia, March 30, 1844: Sending a communication on the Smithson legacy to be read at the April meeting, and contributes $5 towards the expenses, &c.

From Capt. J. H. Aulick, U. S. Navy, Washington, March 30, 1844: Presenting a volume, &c.

From Samuel H. Tyson, Custom House, Philadelphia, March 30, 1844: Has forwarded a box to the Institute, &c.

From Professor J. W. Bailey, (to Col. Totten,) West Point, March 30, 1844: Enclosing a paper on American polythalamia, to be read at the April meeting of the Institute, and subscribing $5, &c.

From Professor S. S. Haldeman, Columbia, Pennsylvania, March 30, 1844.

From Com. W. C. Nicholson, U. S. Navy, Boston, March 30, 1844: Respecting the box of antique vases, &c., left in the care of Com. Morris, &c.

From J. H. Alexander, Baltimore, March 30, 1844.

From Professor H. St. George Tucker, University, Virginia, April 1, 1844: Presenting several works from his own pen, &c.

From Dr. R. Dunglison, Secretary American Philosophical Society, Philadelphia, April 1, 1844: Announcing the death of Mr. Duponceau, late President of the American Philosophical Society, and an honorary member of the Institute, &c.

From Robert Serrell Wood, of Philadelphia, Washington, April 1, 1844: Presenting his work on electricity to be distributed among the members, &c.

From D. J. M. Loop, (to Mr. Spencer,) Carlisle, Pennsylvania, April 1, 1844: Asking for information respecting the Institute, &c.

From Henry Wheatland, Salem, Massachusetts, April 1, 1844: Subscribing $10 for two volumes of the publication, if made, of the proceedings of the meeting in April, and will forward minerals, shells, &c., &c., if they will be acceptable.

From Dr. M. C. Buck, Washington, April 2, 1844: Sending specimens of copper ore, &c., from an old mine in Warren County, Virginia, with a letter from his nephew describing them.

From Robert A. Parrish, Jr., Philadelphia, April 2, 1844: Communicating to the Institute a paper entitled "Solution of the principle of the rotation and divergence of a watch crystal when placed on a drop of water upon an inclined glass plane," &c.

From Rev. John O. Choules, Jamaica Plain, near Boston, April 2, 1844.

From Louis Cavalli, Detroit, April 2, 1844: On the subject of the April meeting of the Institute, and Vattemare's plan of exchanges, and offering his services to exchange and distribute seeds, &c.

From Professor J. H. Agnew, New York, (received April 3, 1844:) Will present several works, of which he is the editor, and will read a paper to the April meeting.

From Col. J. G. Totten, Washington, April 4, 1844: Presenting, in the name of Major C. Davies, Professor at West Point Military Academy, a series of text books, prepared by him for the use of schools and colleges.

From Professor Charles M. F. Deems, Chapel Hill University, North Carolina, April 4, 1844: Transmitting $5, in aid of the Institute, &c.

From Professor James Hamilton, Nashville, April 4, 1844: Remitting $5, for the volume of proceedings, and stating that others near him propose to do the same.

From Professor George Tucker, University, Virginia, April 4, 1844: Presenting $10 towards the publication of the proceedings of the April meeting, and will give more with pleasure, &c.

From Hon. George P. Marsh, House of Representatives, April 4, 1844: Stating that the memorial of the Institute has been referred to him as a member of the Library Committee of Congress, and asking information on certain points, to enable him to meet objections made by persons unfriendly to the Institute; inquiring, also, about the Norwegian coins presented by Professor Holmboe, of Norway.

From A. H. Everett, Boston, April 5, 1844: Presenting a volume, &c.

From J. C. Reynolds, L. L. D., Richmond, Va., April 5, 1844: Presenting copy of a Latin dissertation, by himself, published by the University of Heidelberg, and will subscribe to the volume of proceedings of the April meeting as soon as the prospectus appears.

From Professor W. W. Mather, Hudson, Ohio, April 6, 1844: Presenting his various geological works, of which he gives a list, &c.

From John Slee, (to Mr. Spencer,) Baltimore, April 8, 1844: Submitting, through him to the Institute, observations on the geology, thermal springs, ancient posts, &c., of Genesee county, with an account of antiquated weapons, which may afford a clew to the age of the remains, &c.

From John Pickering, Boston, April 8, 1844: Enclosing a biographical sketch of the late P. S. Duponceau.

From Thomas Turner, Windsor, North Carolina, April 8, 1844: Enclosing $5 towards the expenses of April meeting, &c.

From Prof. J. W. Dunbar, Baltimore, (received April 9, 1844:)

Enclosing $5 for himself, and $5 for the Maryland Historical Society, towards the publication of the proceedings of the April meeting.

From Chas. Woodward, Corresponding Secretary of the Natural History Society of Geneva College, New York, April 9, 1844: Acknowledging communications, and accepting correspondence on the part of the Natural History Society of Geneva.

From Joseph Tuley, Milwood, Virginia, April 9, 1844.

From Josiah Quincy, President Harvard College, April 12, 1844.

From H. L. Ellsworth, Patent Office, Washington, April 12, 1844: Handing over a box containing contributions from Dr. Jackson, and a catalogue of them.

From Brantz Mayer, Corresponding Secretary Maryland Historical Society, Baltimore, April 12, 1844: Announcing the formation of the Maryland Historical Society, which will be happy to enter into relations of correspondence and exchanges with the Institute.

From Alfred S. Waugh, Mobile, April 13, 1844.

From George Endicott, New York, April 15, 1844: Acknowledging membership, and transmitting $5 towards the publication of the proceedings of the late meeting.

From Thomas Turner, Postmaster, Windsor, North Carolina, April 15, 1844: Transmitting $15, for various persons for expenses of the publication of the April meeting of the Institute.

From E. H. Davis, Chillicothe, Ohio, April 18, 1844: Transmitting $5 for himself, and $5 for Col. John Madeira, for copies of the proceedings of the late meeting of the Institute, and promising to forward specimens of western shells, with descriptions of them, &c.

From J. M. Allen, Civil Engineer, Lyons, New York, April 18, 1844.

From Naval Lyceum, Brooklyn, New York, by M. D. Newman, Com. U. S. Navy, Corresponding Secretary, April 18, 1844.

From A. H. Everett, Boston, April 20, 1844.

From George B. Wallis, Washington, April 20, 1844: Describing Niagara, &c., and offering specimen of the table rock of the falls, &c.

From George Tucker, University, Virginia, to Mr. Spencer, April 20, 1844: Transmitting a communication, &c.

From John C. Brent, Washington, April 23, 1844.

From Professor Henry Tutwiler, La Grange College, Alabama, April 24, 1844: Enclosing $5, to pay for a publication of the proceedings of the late meeting.

From Hon. Theodore Frelinghuysen, New York, April 27, 1844: Thanking the Institute for conferring membership on him, and will be happy to advance its interests.

From Daniel J. Desmond, Corresponding Secretary Historical Society, Pennsylvania, Philadelphia, April 29, 1844.

From Dr. M. C. Buck, Washington, April 29, 1844.

From Lieut. D. Ruggles, U. S. Army, Fort Brady, Michigan, April 30, 1844: Proposing as members several persons who will be useful to the Institute; is about to proceed to Lake Superior, with a party, and will send on collections, &c.; will forward money soon, and asks that his name may be enrolled as a subscriber to the proceedings of the late meeting.

From Thomas Pratt, Philadelphia, April 30, 1844: Presenting a package of Continental money.

From R. S. McCulloh, Professor Mathematics, Jefferson College, Cannonsburg, Pennsylvania, April, 1844.

From Frederick de Burgraff, New York, May 4, 1844.

From John O. Barnes, Custom-House, Boston, May 4, 1844: Apprizing Secretary of the receipt, at the Custom-house, of two boxes for the Institute, one from Singapore, and one from Manilla, about which he asks directions, &c.

From J. K. Townsend, Washington, May 7, 1844.

From Alexandre Vattemare, Paris, (received May 8, 1844:) Enclosing two letters from distinguished persons, presenting their works, &c., and asking to be paid expenses of boxing and packing up the two last cases for the Institute.

The Hon. Joseph R. Ingersoll offered remarks upon the pecuniary embarrassments of the Institute, and expressed a hope that Congress would furnish the required aid.

Mr. C. H. Olmstead, of Hartford, Connecticut, exhibited specimens of the European and American *cottus gobio*, which he considered identical. Professor Haldeman made observations upon the same subject.

Stated Meeting of September, 1844, *including June, July, and August.*

The Corresponding Secretary announced the following contributions and donations:

For the Cabinet.

A Box, containing a collection of the principal Minerals of Chile, with a descriptive List.—*From Professor Ignace Domeyko, Coquimbo, Chile.*

Conurus carolinensis, (Carolina Parrots,) four fine specimens.—*From W. B. Lewis.*

Box of Edible Birds' Nests, of China, presented to Rev. Peter Parker, by the Imperial High Commissioner, (value $40 in China.)—*From Mr. Parker.*

Package of Vegetable Silk produced by the Asclepias gigantea.—*From Henry Hutchings, by the hands of Consul Harrison, Jamaica.*

Cottus gobio, &c., (two specimens.)—*From C. H. Olmstead, Manchester, Connecticut.*

Box, containing a large and fine Portrait of General Jackson, by Earle.—*From Major W. H. Chase, United States Engineer Corps.*

Two boxes, containing valuable Books, Engravings, &c., &c., from France.—*From Alexandre Vattemare, Paris.*

Box, containing Skin of an Elk, Minerals, and other Curiosities.—*From Capt. P. St. George Cooke, United States Dragoons, Fort Leavenworth.*

Box of Minerals, &c.—*From Harry Neale, of Unity, New Hampshire, by the hands of the Hon. Edmund Burke, House of Representatives.*

Jar, containing two remarkable Fishes caught by him in the Chesapeake, which he calls the Butterfly Fish.—*From Lieut. W. D. Porter, United States Navy.*

Box, containing a splendid prepared Mammoth Lobster.—*From Major W. Turnbull, in the name of Amos Lawrence, Jr., Boston.*

Bottle, containing a curious Worm, from the Isle of Pines.—*From Lieut. Carlisle P. Patterson, United States Navy.*

A Bottle, containing Fucus Natans, or Gulf Weed, in flower.—*From Capt. Dornin, United States Navy.*

A box, containing living Plants of the Cherry, Wild Peach, &c., for cultivation.—*From Major E. G. W. Butler, near Bayou Gould, Louisiana, by the hands of George Law, Baltimore.*

For the Library.

East India Marine Society of Salem, 1 vol.—Supplement to the Catalogue of the Museum of the Marine Society, 1 vol.—Journal of the Essex County Natural History Society, vol 1, No. 2, 1839, 1 vol.—Catalogue of the Salem Athenæum, 1 vol.—Ephemerides Astronomicas, &c., Corimbra, 1843, calculated for 1845.—*From Henry Wheatland, Salem.*

Around the World, &c., by J. Henshaw Belsher, United States Navy, 2 vols., duodecimo.—*From the Author.*

Institut Royal de France, 1844, 1 vol.—*From A. Vattemare.*

Jamaica Monthly Magazine, No. 1, April, 1844.—Report on the Mount Vernon Mining Company, of Kingston, Jamaica, 1844.—*From R. M. Harrison, United States Consul, Jamaica.*

Fac-Similes, on Copper Plates, of Hieroglyphics dug out of a mound in Pike County, Illinois.—*From W. Y. Head, Warsaw, Illinois.*

History of the Conquest of Mexico, by Wm. H. Prescott, 3 vols., octavo, 1843.—*From the Author.*

Letters on the National Institute, &c., by John Carroll Brent, 1844. —*From the Author.*

Tableau Général du Commerce de la Belgique, 1836, 2 vols., folio.—Documens Statistiques sur le Royaume de Belgique, 4 vols., quarto.—Compte de l'Administration de la Justice Criminelle en Belgique, 1 vol., quarto.—*From C. Serruys, Belgian Minister, in the name of his Government.*

Life and Scientific Researches of Smithson, by W. R. Johnson.—*From the Author.*

Notice sur l'Etablissement Géographique de Bruxelles, 1843.—Dictionnaire des Hommes de Lettres, des Savans, et des Artistes, de la Belgique, &c., 1837.—*From L. Cavalli, Detroit.*

Christian China Almanack, for 1844–'5, edited by Rev. D. Ball, Hong-kong, China.—*From H. A. Goldsborough.*

Transactions of the American Institute, Albany, New York, 1844.—Premium List, &c., &c., &c.—*From H. O. Reilly, Secretary State Agricultural Society.*

Observations on the Magnetic Dip in the United States, 4th series, by Professor Loomis.—*From the Author.*

Western Lancet, vol. 3, No. 2, Cincinnati, June, 1844.—*From Dr. L. M. Lawson, Editor.*

Journal of the American Oriental Society, vol. 1, No. 1, 1843.—*From the Society.*

Constitution and By-Laws of the New York Historical Society, 1844.—*From the Society.*

Poland, Russia, and the United States, by Major Tochman, 1844.—*From H. Kallussowski.*

Analysis of Rice, Rice Straw, &c., by Professor C. U. Shepard, Charleston, South Carolina.—*From Hon. Mr. Poinsett.*

Address before the Agricultural, Horticultural, and Botanical Society of Jefferson College, Washington, Mississippi, Natchez, 1841.—*From B. L. C. Wailes, President.*

Mémoire sur l'Histoire Primitive des Races Oceaniennes et Américaines, par M. Gustave d'Eichthal.—*From W. B. Hodgson.*

Constitution of Greece; Athens, 1844.—*From W. W. Andrews, United States Consul, Malta.*

Excursion á las Cordilleras de Copiapo, &c., por Don Ignacio Domeyko, 1843.—*From the Author.*

Report of Capt. George W. Hughes, Topographical Engineers, relative to the working of Copper Ore, 1844.—*From Capt. Hughes.*

Suggestions of New Theories to the Scientific, by A. Girard; Mobile, 1843.—*From the Author.*

Letter to Sir John Herschel, Bart., from Professor Whewell, April 11, 1844.—*From E. Everett, American Minister, London.*

Discourse on the Surviving Remnant of the Indian Race in the United States, by Job R. Tyson, Philadelphia.—*From the Author.*

Excursion to the Mammoth Cave and the Barrens of Kentucky,

with notices of the Land Settlement of the State, by Rev. R. Davidson.—*From the Author.*

Proceedings of Academy of Natural Sciences, Philadelphia, vol. 2, Nos. 2 and 3.—*From the Academy.*

Illustirte Zeitung, April 27, 1844.—*From J. G. Flügel, United States Consul, Leipsic.*

Appleton's Literary Bulletin, vol. 1, No. 14 and 15; New York, 1844.—*From the Publishers.*

Royal Gazette of Bermuda, containing Meteorological Tables, 1844. —*From Gov. Reid.*

Collection of Books, chiefly relating to Poland, &c., sixteen volumes in all.—*From M. Harro-Harring and M. Kallussowski.*

Principles and Practice of Obstetric Medicine, by James Blundell, M. D., London; 1840, 1 vol.; octavo.—*From the Author.*

Le Sein's Philosophy; Hartford, 1843; two copies.—*From the Author.*

The following resolution was unanimously adopted:

Resolved, That the Hon. Levi Woodbury be requested to deliver the next annual address before the Institute, in January, 1845.

Dr. M. C. Buck read a paper "on the use and abuse of medicine," which was referred to the Medical Department.

Abstract of Correspondence.

Letters—

To Col. B. L. C. Wailes, Adams County, Mississippi, June 10, 1844.

To H. O. Reilly, Esq., Secretary of New York State Agricultural Society, Albany, June 8, 1844.

To W. S. Philips, Pleasant Valley, Dallas County, South Alabama, June 17, 1844.

To Professor W. R. Johnson, Corresponding Secretary Academy Natural Sciences, Philadelphia, June 26, 1844.

To Dr. Meissen, President Vesalian Society, Brussels, July 8, 1844.

To Major W. H. Chase, Pensacola, August 3, 1844.

To Alexandre Vattemare, Paris, June 19, 1844: Transmitting £40 11*s.* sterling, equal to $200, on account of his expenses, &c.

To George Law, Baltimore, August 17, 1844.

Letters and Communications.

From Professor Parker, Cleaveland, Bowdoin College, 1844.

From Dr. J. G. Flügel, United States Consul, Leipsic, July 1, 1843.

From Professor Ignace Domeyko, Coquimbo, Chile, August 14, 1843: Thanking the Institute for membership, and presenting a

collection of the principal minerals of Chile, of which he encloses a descriptive list.

From W. Tell Poussin, Paris, October 1, 1843: Thanking the Institute for membership, and stating that he has sent as a present a copy of his last work on America, and promising to send his former works on the same subject.

From E. R. Dorr, U. S. Consul, Valparaiso, December 11, 1843: Forwarding, by United States Frigate Constellation, a letter and box of splendid minerals, from Professor Domeyko, of Coquimbo.

From Rev. Peter Parker, China, February 12, 1844.

From J. C. Pickett, U. S. Chargé d'Affaires, Lima, March 5, 1844: On the subject of a canal across the Isthmus of Panama.

From C. Cushing, Minister to China, Macao, March 18, 1844: Recapitulating the subjects of his different papers addressed to the Institute, and naming those he is preparing.

From D. P. Brown, (to J. R. Ingersoll,) Philadelphia, March 20, 1844: Promising to forward a superb collection of engravings, &c.

From J. C. Pickett, U. S. Chargé d'Affaires, Lima, April 13, 1844: Continuation of the subject of his former letter, 5th of March, on the Panama canal.

From C. F. Rafn, Secretary Northern Royal Society of Antiquarians, Copenhagen, April 16, 1844: Describing the historical and antiquarian labors which the Royal Society has undertaken and in part executed.

From M. Chevalier, Paris, April 22, 1844: Transmitting his recent work on the Panama canal to the Institute, whose favorable opinion he seeks.

From H. Wheatland, Salem, Massachusetts, April 24, 1844.

From J. H. Belsher, Philadelphia, April 29, 1844.

From A. Vattemare, Paris, May 1, 1844: Acknowledging letter 9th of March, and has distributed some of the diplomas which accompanied it; transmits twenty letters of thanks, from distinguished persons; states that Marshal Soult is about to make a report on the best means of realizing the system of national exchanges; encloses copy of proceedings of Legislature of Maine, in favor of the like object; has on hand still larger collections for the Institute, for packing and despatching which he needs money; sends copy of statute books of French Institute.

From Professor Joseph Johnson, Charleston, South Carolina, May 3, 1844.

From J. G. Flügel, U. S. Consul, Leipsic, May 4, 1844.

From David Myerle, Indian Territory, May 4, 1844: Giving an account of his efforts to induce the Indians to cultivate hemp, &c.

From the same, May 10, 1844: On the same subject, &c.

From Robert M. Harrison, U. S. Consul, Jamaica, May 10, 1844: Presenting one number of a new Jamaica periodical, and asking an opinion upon its merits, &c.

From John O. Barnes, Custom-House, Boston, May 10, 1844.

From R. M. Harrison, U. S. Consul, Jamaica, to Hon. J. C. Calhoun, May 11, 1844: Sending a package for the Institute, which he requests him to hand to the Secretary.

From B. Silliman, Jr., Washington, May 13, 1844: Communicating vote of Association of American Geologists and Naturalists, in reply to an invitation to attend the meeting of the Institute.

From J. K. Townsend, Washington, May 14, 1844.

From R. M. Harrison, U. S. Consul, Jamaica, May 16, 1844: Transmitting report of the French Engineer on the Panama canal, and asking the opinion of the Institute upon it.

From Butler Maury, Secretary U. S. Ship Constellation, Norfolk, Virginia, May 16, 1844.

From Major W. H. Chase, Pensacola, May 16, 1844.

From Elwood Morris, Philadelphia, May 21, 1844: Acknowledging membership, and enclosing $5 towards defraying the expenses of the publication of a volume of proceedings, &c.

From Joseph T. Dutten, Brooklyn, L. I., May 21, 1844.

From Alexandre Vattemare, Paris, May 21, 1844: Transmitting letters of acknowledgment from distinguished persons recently made members of the Institute; referring to former letters, in which he recommends that a difference be made in the rank of members appointed; asks for money to enable him to send on the sculpture and books on his hands, &c.

From Professor W. A. Norton, Newark, Delaware, May 27, 1844: Transmitting his paper on the "nebular hypothesis," for publication, &c.

From Masters, Markoe, & Co., New York, May 28, 1844: Announcing the receipt of two large boxes for the Institute.

From S. B. Dusenberry, Assistant Quartermaster, Baltimore, May 29, 1844: Communicating agent's receipts and expenses on a large box for the Institute.

From J. Ward Andrews, Marietta, Ohio, May 31, 1844: Acknowledging membership, and enclosing $5 towards the publication of the proceedings.

From Wm. Y. Head, Warsaw, Illinois, May, 1844: Transmitting fac-similes of certain copper plates, bearing hieroglyphics, dug out of a mound in Pike County, Illinois, by Robert Wiley.

From J. W. Monette, Washington, Michigan, June 1, 1844: Acknowledging membership, and enclosing plan of his work on the valley of the Mississippi.

From Professor E. Gill, College Point, New York, June 1, 1844.

From M. Geoffroy St. Hillaire, Paris, June 4, 1844: Sending duplicate list of birds presented to the Institute in 1842, by the Muséum d'Histoire Naturelle, of Paris.

From W. H. Prescott, Boston, June 4, 1844: Acknowledging

membership, and stating that he has directed his publishers to forward, as a present, his "Conquest of Mexico."

From Hon. Edmund Burke, House of Representatives, Washington, June 4, 1844: Presenting a box of minerals from Henry Neal, of Unity, New Hampshire.

From N. C. Brooks, President of the High School, Baltimore, June 4, 1844: Asking contributions for the museum of the high school.

From Lieut. J. H. Ward, U. S. Navy, Washington, June 5, 1844: Communicating letter from the Connecticut Historical Society, appointing him a delegate to the April meeting.

From Alex. Vattemare, Paris, June 6, 1844: Forwarding further letters of thanks from persons elected members; asking for money to aid in defraying his expenses in behalf of the Institute; fears he will be obliged to abandon his enterprise on this account; complaining that his labors are not appreciated in the United States, and wishing the presents he sends to be considered as for exchanges, &c.

From Major E. G. W. Butler, Dumboyne Plantation, Bayou Gould Post Office, Louisiana, June 7, 1844: Has sent a box of plants of the cherry, wild peach, swamp dogwood, &c., and details curious changes which the cherry has undergone by expatriation, and hopes experiments may be made on it by the Institute.

From W. B. Hodgson, (of Savannah,) New York, June 8, 1844: Remarks on M. Gustave d'Eichthal's memoir on the primitive history of the Oceanic (Polynesian) and American races.

From Hon. Dixon H. Lewis, U. S. Senate, June 10, 1844.

From John C. Brent, Washington, June 10, 1844.

From B. B. Minor, editor Southern Literary Messenger, Richmond, Virginia, June 10, 1844: Asking information about the Institute.

From Professor M. Jacobs, Gettysburg, Pennsylvania, June 12, 1844.

From Hon. Sidney Breese, U. S. Senate, to Mr. Choate, June 13, 1844.

From Hon. Rufus Choate, U. S. Senator, June 14, 1844.

From P. Thompson, Washington, June 14, 1844: Enclosing $105, subscribed for M. Vattemare.

From Hon. L. Woodbury, U. S. Senator, to Mr. Townsend, June 17, 1844: Consenting to deliver the next annual address, and regretting that the House did not concur with the Senate in granting the appropriation asked for by the Institute.

From Hon. J. J. Crittenden, U. S. Senator, June 17, 1844.

From G. Bernard, New York, June 20, 1844.

From George Moore, U. S. Consul, Trieste, June 22, 1844: Referring to former letters respecting a box of plants sent to the Institute, by Signor Tommasini, and presenting a collection of ancient coins, which he has shipped by the Camilla to New York.

From B. B. Minor, editor Southern Literary Messenger, Richmond, Virginia, June 22, 1844: Acknowledging membership, enclosing $5 fee, and expressing warm interest in the Institute.

From Robert A. Parrish, Jr., Philadelphia, June 24, 1844.

From R. M. Harrison, U. S. Consul, Jamaica, June 24, 1844.

From B. L. C. Wailes, Washington, Mississippi, June 25, 1844.

From Lieut. W. D. Porter, U. S. Navy, Norfolk, Virginia, June 26, 1844.

From C. S. Tripler, M. D., U. S. Army, Detroit, June 27, 1844: Acknowledging membership, &c.; suggesting a plan of forming a military anatomical museum, consisting of specimens of normal and morbid anatomy, &c., to be deposited in the Institute.

From C. Serruys, Belgian Minister, June 29, 1844: Presenting, in the name of his Government, several statistical books on Belgium.

From S. W. Dana, Fayetteville, Lincoln County, Tennessee, June 29, 1844.

From Hon. J. R. Poinsett, South Carolina, June 30, 1844: Transmitting letter from Dr. Meisser, President of the Societé Vesalienne, &c., of Brussels, and requesting the Secretary to reply to it; inquiring what Congress has done for the Institute.

From W. B. Hodgson, Philadelphia, July 2, 1844.

From H. Wheaton, American Minister, Berlin, July 3, 1844: Musical celebration given by the Academy of Arts of Berlin, in honor of the memory of Thorwaldsen, &c.

From Lieut. W. D. Porter, U. S. Navy, Norfolk, Virginia, July 3, 1844: Describing the butterfly-fish presented by him, and calling attention to his former suggestions about establishing cabinets on board our ships of war and at our navy yards, in aid of the Institute's collections, &c.

From H. & W. Delafield, New York, July 6, 1844: Sending bill of lading for a large box from Major Chase.

From C. Edwards Lester, U. S. Consul, Geneva, July 10, 1844: Proposing several distinguished persons who would well and gladly represent the Institute at the meeting of Italian Savans, to take place at Milan, on the 12th of September, of the present year, with whom he would be happy to be associated.

From Major William Turnbull, Washington, July 11, 1844.

From Professor W. R. Johnson, Philadelphia, July 11, 1844.

From Robert Wickliffe, U. S. Chargé d'Affaires, Turin, July 12, 1844: On American artists in Florence.

From Dr. Louis Cavalli, Detroit, July 15, 1844.

From N. S. Jarvis, M. D., to Col. Abert, U. S. Army, Fort Jesup, July 16, 1844: Stating that he has packed and sent on for the Institute another collection, embracing nearly all the reptiles of Louisiana.

From A. D. Chaloner, M. D., Philadelphia, July 18, 1844:

Sending his paper on the petrified forest near Cairo, read at the April meeting.

From Alexander H. Everett, Springfield, Massachusetts, July 23, 1844.

From R. K. Haight, New York, July 24, 1844.

From Hon. John C. Spencer, New York, July 26, 1844: Offering suggestions in regard to the publication of the proceedings of the April meeting.

From the same, same date and place: Acknowledging honorary membership, &c.

From J. W. Dana, Fayetteville, Lincoln County, Tennessee, July 27, 1844: Enclosing $5 for the proceedings about to be published.

From Professor M. Jacobs, Gettysburg, Pennsylvania, July 29, 1844.

From Asbury Dickins, Secretary of Senate, July 29, 1844.

From Professor B. Hallowell, Sandy Spring, Maryland, July 30, 1844: Enclosing his essay read before the April meeting.

From Hon. J. R. Poinsett, South Carolina, July 30, 1844: Transmitting letter from T. Lloyd Halsey, who has presented a picture to the Institute, which he left at Rome.

From Gales & Seaton, Washington, July 30, 1844: Enclosing note from Hon. Mr. Payne, of Alabama, in which he requests copies of the publications of the Institute for the Hon. Chief Justice of Alabama, Henry W. Collier.

From Rev. John G. Morris, D. D., Baltimore, July 30, 1844: Giving an account of what he and Mr. Townsend have done to preserve Count Castelnau's collection of insects, and the condition in which they found it.

From Dr. Frederick A. Davisson, Hillsborough, Loudon County, Virginia, August 1, 1844: Acknowledging membership, and sending two boxes, one of bivalve shells, the other of minerals, &c.

From Joseph T. Dutton, Brooklyn, Long Island, August 1, 1844: Describing certain meteorological phenomena observed by him; the mirage.

From F. J. Grund, U. S. Consul, Antwerp, Philadelphia, August 7, 1844.

From Hugh A. Goldsborough, Washington, August 10, 1844.

From W. B. Hodgson, New York, 1844.

From Caleb Cushing, American Minister to China, Aden, Arabia, November 3, 1843: Describing the British stronghold of Aden, in Arabia.

From the same, Bombay, November 26, 1843: Description of Bombay, &c.

From A. B. Russell, to Hon. J. R. Ingersoll, New York, March 16, 1844: On the advantages of a National Institute, &c., &c.

From F. Boott, M. D., London, March 29, 1844.

From Hon. A. S. Porter, U. S. Senator, Detroit, August 7, 1844.

From Henry O'Reilly, Albany, New York, August 9, 1844.

From Professor M. Jacobs, Gettysburg, Pennsylvania, August 13, 1844.

From Lieut. M. F. Maury, U. S. Navy, Washington, August 15, 1844: Sending a bottle of *fucus natans*, presented by Capt. Dornin, United States Navy.

From Henry McCormac, M. D., Belfast, Ireland, July 16, 1844.

From Col. G. L. Thompson, Washington, August 17, 1844.

From A. Thomas Smith, Chief Clerk Navy Department, August 17, 1844: Acknowledging Secretary's note, and communicating copy of the order sent by the Navy Department to Com. Smith, on the Mediterranean station, to have the painting presented by Mr. Halsey to the Institute transported from Rome to Civita Vecchia, and thence to the United States, on board any United States vessel of war, the expenses to be refunded by the Institute.

Letters and communications have been received also from the following persons, accepting, and tendering acknowledgements for membership, conferred upon them; expressing friendly feelings towards the Institute, and a warm disposition to aid its objects, and in many instances making contributions:

Le Comte Leon de Laborde, *Paris*.
Comte Daru, "
Baron de Barante, "
Vicomte de Cormenin, "
Baron Rendu, "
Baron Desnoyers, "
Comte d'Hauterive, "
M. Cunin Gridaine, "
M. Forster, "
M. Macarel, "
M. Orfila, "
M. Le Normand, "
M. Sixdeniers, "
M. Pankouke, "
M. Troplong, "
M. Estancelin, "
Dr. Bixio, "
M. Isabey, Jr., "
M. Barre, "
M. Camille Paganel, "
M. Girard, "
M. D'Audifret, "
M. Coffiniere, "
M. Hittorff, "
M. Durieux, "
M. D'Orbigny, "
M. Engelman, "
M. Dufresnoy, "
M. Jazet, "
Capt. Edward Sabine, *British Army*.

James Blundell, M. D., *Westminster, England*.
John Hamilton, *Dublin*.
Wm. Railton, Architect, *London*.
John Jay, *New York*.
W. Oland Bourne, *Brooklyn, L. I.*
S. C. Donaldson, *Baltimore*.
John Spear Smith, "
Robert Leslie, "
John L. Carey, "
J. H. Alexander, "
W. D. Newman, *United States Navy, Corresponding Secretary U. S. Naval Lyceum, New York*.
M. J. Burke, *New York*.
John F. Frazer, *Philadelphia*.
George Ord, "
Rev. Geo. W. Bethune, *Philadelphia*.
Hon. A. H. Everett, *Boston*.
J. H. C. Coffin, *U. S. Navy, Washington*.
Joseph Saxton, *Philadelphia*.
Prof. James Hamilton, *Nashville, Tenn.*
W. L. Atlee, *Lancaster, Penn.*
Prof. W. A. Norton, *Newark, Del.*
William Davidson, M. D., *Glasgow, Scotland*.
William Carpenter, M. D., *Ripley, Surrey, England*.

In answer to a resolution requesting the committee to which had been entrusted the management of the Scientific Convention of April,

1844, to make a report to the Institute, the Corresponding Secretary made a full report, embodying that called for by the resolution. The whole will be found below, in the "Proceedings of the Meeting of the National Institute, in April, 1844."

Stated Meeting, December 9, 1844.

Hon. Levi Woodbury in the chair.

The following donations were received:

For the Cabinet.

Box, containing Living Plants of the Cherry, Wild Peach, Swamp Dogwood, &c., &c.—*From Major E. G. W. Butler, Louisiana.*

Two boxes of Silver and Copper Ores, &c., &c., of Chile.—*From General Aldernate, Secretary of War and Navy.*

Idol, carved in Jade, from New Zealand; Hotté, a remarkable insect or worm, found growing at the foot of the rata tree, with a plant growing out of its head. This animal, it is said, travels up both the rata and perriri trees, and entering into the top, eats its way, perforating the trunk of the tree, until it reaches the root. It then comes out of the root, and dies or lies dormant, and the plant propagates out of its head; the body remains perfect and entire, of a harder substance than when alive. From this insect the natives make a coloring for tattooing.—*Presented by John B. Williams, Salem, Massachusetts.*

Box, containing two Horned Lizards, *Agama*, (alive,) from Galvezton, Mexico, and a Gofer, (alive,) from Pensacola, with Eggs of both Animals.—*From Captain James T. Gerry, United States Navy.*

Painting, done on the interior of an Oyster Shell, by J. G. Bruff.—*From Mr. Bruff.*

Sword of a Sword Fish killed near the Isle of Shoals.—*From Lieut. Junius Boyle, United States Navy.*

Chinese Chop-Sticks, (five.)—*From Josiah F. Polk.*

Two boxes of Minerals, Shells, &c., &c.—*From Dr. Frederick A. Davisson.*

Box of Botanical Specimens Plantæ Selectæ ex Herbario Floræ Illyricæ Mutii Tommasini.—*From Signor Tommasini, through George Moore, United States Consul, Trieste.*

Box, containing one large Silver Medal; one large Copper Medal; twenty-seven Silver Coins; seventy-one Copper Coins; two Strings Chinese Cash.—Box, containing seven Coins, found at Pestum, Italy.—*From Mrs. Anne Izard Deas.*

Wolf Skin and Appendages, and Buffalo Hide, worn by an Indian Medicine Man; Sandstone, (variegated,) from Missouri.—*From David Myerle.*

Box, containing a Model, in terra cotta, of a Grecian Temple at Girgenti.—*From Commodore Nicolson, United States Navy.*

Flying Fish, (prepared,) of uncommon size and rare species.—*From R. S. Higinbothom, U. S. Consul, Antigua.*

For the Library.

Collection de Chroniques Belges Inedites, 8 vols., quarto, published by the Belgian Government.—*From the Belgian Government, by M. Serruys, Minister of Belgium.*

Annales de Chimie et de Physique, par Messrs. Gay Lussac, Arago, &c., &c., tomes 4, 5.—Box, containing Essays and Papers on scientific subjects, by Monsieur Dellexene, of Lille.—New Testament, in Armenian.—*From Wm. G. Lettsom, British Legation.*

Collection of valuable Books.—*From Alexandre Vattemare.*

Tratado de Ensayes, &c., &c., by Señor Ignacio Domeyko, 1844, Professor Chemistry, College of Coquimbo, Chile.—*From the Author, by E. R. Dorr, United States Consul, Valparaiso.*

Dr. Wm. Kramer's Diseases of the Ear, translated by James Risdon Bennett; London, 1 vol., octavo, 1837.—Dr. J. R. Bennett on Hydrocephalus, &c., 1 vol., octavo, 1843.—*From Dr. Bennett.*

Papers on Practical Engineering, &c.—*From Col. Totten, Chief United States Engineers.*

Notes on Northern Africa, &c., by William B. Hodgson, 1844, octavo.—Crania Ægyptiaca, &c., 1 vol., quarto, 1844, by Dr. S. G. Morton.—*From Wm. B. Hodgson.*

Correspondence of Mr. Ralph Izard, of South Carolina, &c., with a Memoir, 1 vol., duodecimo, 1844.—*From Mrs. Anne Izard Deas.*

Nitheroy, Revista Brasiliense, tom. prim., Nos. 1 and 2, 1836.—*From D. J. G. de Magalpaens, Marquis de Aranjo Porto, Alegre, Brazil, Editor and principal contributor.*

Annuaire du Journal des Mines de Russie, année 1840; St. Petersburg, 1843, 1 vol., octavo.—*From Major General Tscheffkine, Imperial Corps Mining Engineers, Russia.*

Annuaire Magnétique et Météorologique de Année, 1841, 2 vols., quarto; St. Petersburg, 1843.—*From Count Cancrine, Chief of the Imperial Corps of Engineers, Minister of Finances, &c.*

Histoire de Pologne, par Joacquim Lelewel, 2 vols., octavo, 1 vol. plates; Paris, 1844.—*From Professor Henry Kallussowski.*

Mémoires de la Société Royale des Antiquaires du Nord, 1840, 1843, Section Americaine, Copenhagen, 1843, 1 vol., octavo.—*From Edward Everett, American Minister, London.*

Catalogues of Books, for 1840, 1841, 1842, &c.—*From Frederick Hermann Nestler & Melle, Hamburg.*

Circular, New York Agricultural Society, 1844.—*From the Society.*

Journal of the Oriental Society, vol. 1, No. 11, 1844; Boston.—*From the Society.*

Proceedings of the American Philosophical Society, Philadelphia, April and June, 1844.—*From the Society.*

Proceedings of the Academy of Natural Sciences, Philadelphia, September and October, 1844.—*From the Academy.*

The Anatomy of Tebennophorus Carolinensis, and of Glandina Truncata, by Jeffries Wyman, M. D.—*From the Author.*

Catalogue of the Officers, Alumni, and Students of the University of Alabama, 1844.—*From*

Dunglison's Discourse on P. S. Duponceau, October 25, 1844.—*From Dr. Dunglison.*

On a new species of Hippopotamus, by Dr. S. G. Morton, 1844.—*From Dr. Morton.*

Royal Gazette of Bermuda, containing Meteorological Tables, from August 29 to November 19, 1844.—*From His Excellency Gov. Reid.*

Principles of Human Physiology, &c., &c., by Wm. B. Carpenter, M. D., F. R. S.; London, 1844, 1 vol., octavo.—*From the Author.*

Gospel of St. Matthew, translation in the Shawnee language.—*From David Myerle.*

Abstract of Correspondence.

Letters—

To J. Raymond Clarke, New Orleans, August 26, 1844: On the subject of his proposed visit to the ruins of Central America.

To Major E. G. W. Butler, Bayou Gould, Louisiana, September 14, 1844: Informing him that arrangements had been made for experiments on his seeds and plants, the results of which would be given him.

To N. S. Jarvis, M. D., U. S. A., Fort Jesup, September 20, 1844: Informing him that the box of objects of natural history sent by him had arrived in good condition.

To Major General Tscheffkine, Imperial Mining Engineers, St. Petersburg, Russia, September 25, 1844: Respecting a valuable contribution of books from him, &c.

To Alexandre Vattemare, Paris, October 7, 1844: In reply to several letters from him, on a variety of subjects.

To the same, Paris, October 11, 1844: Acknowledging receipt of three boxes of presents.

Letters and Communications.

From R. M. Hamilton, U. S. Consul, Monte Video, December 14, 1843: On the political, moral, and commercial condition of Paraguay.

From Hon. Caleb Cushing, American Minister to China, Ceylon, December 17, 1843: On the natural features of Ceylon, and its chank and pearl fisheries, and the building, cabinet and dye-woods of the Island.

From the same, same date and place: On the gems of Ceylon.

From E. R. Dorr, U. S. Consul, Valparaiso, May 28, 1844.

From General J. Sant. Aldernate, Secretary of War and Navy, St. Jago, Chile, June 14, 1844.

From Man. Carvallo, St. Jago, Chile, June 1, 1844.

From J. Risdon Bennett, M. D., London, July 12, 1844.

From A. Vattemare, Paris, July 16, 18, 1844: Transmitting a number of letters; stating that the Minister of Public Works had given him a geological map and a volume explanatory, to be sent to the Institute, and mentioning other important presents he had received; that he has shipped three boxes of books, statues, &c.; hopes three copies of voyage of the Exploring Expedition will be sent to him, &c.; and acknowledging, with thanks, the receipt of the $200 collected by subscription for him among the members of the Institute.

From the Directeur of the Post Office, Paris, July 30, 1844: Acquainting the Secretary that there are letters for him in the French post office, the postage on which is not paid, &c.

From M. Carvallo, St. Jago de Chile, July 30, 1844.

From John B. Williams, Salem, Massachusetts, August 5, 1844.

From Daniel Jenifer, American Minister Vienna, August 7, 1844: Acknowledging Secretary's letter, and forwarding a supplementary list of learned institutions in Austria.

From John B. Jones, Washington, August 12, 1844: Enclosing a letter from Mr. Lamme, of St. Louis, in relation to a large collection of fossil remains of the Mastodon, &c., &c., which he owns, and wishes to dispose of to the Institute.

From Major W. H. Chase, Corps Engineers, Pensacola, August 19, 1844: Announcing the decease of George E. Chase, &c.

From the same, Pensacola, August 20, 1844: Suggesting that an important work on the early history of Louisiana, in the library of Congress, should be transferred to the Institute, or that another copy should be procured abroad, to the expense of which he will contribute.

From Col. J. G. Totten, Chief Engineer Corps, Washington, August 21, 1844.

From Joseph L. Smith, Harper's Ferry, Virginia, August 23, 1844.

From H. O'Reilley, Recording Secretary New York Agricultural Society, Albany, August 29, 1844: Sending copy of the Society's circular, and asking for the bulletins of the Institute.

From Captain James T. Gerry, U. S. N., Philadelphia, August 29, 1844.

From David Myerle, Indian Territory, Delaware Nation, August 30, 1844: Describing his continue efforts to extend the cultivation of hemp among the Indians.

From M. Vattemare, Paris, August 14, 1844: Expressing an opinion that if Congress continue to refuse pecuniary aid, the Institute would cease to be considered, among the savans of France, as national.

From J. Cozzens, New York, August, 1844: Describing the fossil bones in the possession of Daniel S. Lamme, which he wishes the National Institute to purchase.

From Fernando Kurowski and Marcelin Przepalkowski, Paris, September 2, 1844: Offering to the United States, upon certain terms, an invention important to commerce and the navy, and describing it, &c.

From Alexandre Vattemare, Paris, September 6, 1844: Announcing new and valuable presents placed in his hands for the National Institute.

From the same, Paris, September 7, 1844.

From N. Greene, Post Office, Boston, September 12, 1844.

From Dr. M. C. Buck, Secretary Medical Department, Washington, September 12, 1844.

From A. D. Bache, Superintendent Coast Survey, Massachusetts, September 14, 1844.

From Richard C. Smith, Alexandria, D. C., September 16, 1844: Transmitting ten dollars, initiation fees of membership for himself and his brother, Thomas W. Smith.

From Col. J. W. Schaumberg, Philadelphia, September 20, 1844: Announcing his return from Europe, and forwarding presents placed in his care for the Institute, &c.

From W. B. Hodgson, (of Savannah,) New York, September 21, 1844: Contributing twenty dollars towards the publication of the proceedings of the April meeting of the Institute, &c.

From Alexandre Vattemare, Paris, September 23, 1844.

From Masters, Markoe, & Co., New York, September 24, 1844.

From Nathaniel Greene, Postmaster, Boston, September 24, 1844: Transportation receipt for two boxes for the Institute.

From Hon. Judge Henry W. Collier, Tuscaloosa, September 25, 1844: Transmitting ten dollars for the use of the Institute, &c., &c. &c.

From Henry Wheaton, American Minister, Berlin, September 25, 1844: Continuation of the subject of former letters on the junction of the Atlantic and Pacific oceans, &c.

From Robert Wickliffe, Jr., Chargé d'Affaires, Turin, September 25, 1844: Historic hints on the constitution of Florence.

From Professor W. W. Mather, Athens, Ohio, September 26, 1844.

From Alexandre Vattemare, Paris, September, 1844.

From Jos. T. Dutton, Brooklyn, Long Island, October 1, 1844: On the phenomena of mirage in the United States during the fall, &c.

From G. C. Marchant, Indian Town, Currituck County, North Carolina, October 2, 1844.

From J. G. Bruff, Washington, October 3, 1844.

From Major E. G. W. Butler, Bayou Gould P. O., Louisiana, October 5, 1844.

From Junius Boyle, U. S. Navy, Washington, October 5, 1844.

From John C. Brent, Washington, October 7, 1844.

From J. C. Pickett, U. S. Chargé d'Affaires, Lima, October 10, 1844.

From M. C. Serruys, Minister of Belgium, Washington, October 12, 1844: Presenting, in the name of his Government, eight quarto volumes of Belgium Chronicles, &c.

From J. F. Polk, Washington, October 12, 1844.

From Wm. G. Lettsom, British Legation, October 24, 1844.

From Mrs. A. J. Deas, New York, October 24, 1844.

From David Myerle, St. Louis, Missouri, November 2, 1844.

From Henry C. Flagg, U. S. Navy, to Dr. Wm. Jones, P. M., New Haven, November 6, 1844.

From Wilkins Smith, Postmaster, Uchee, Alabama, November 7, 1844.

From H. Pike & Ward, Baltimore, November 8, 1844.

From Dr. Frederick A. Davisson, Loudon County, Virginia, November 18, 1844.

From H. C. Flagg, U. S. Navy, New Haven, November 20, 1844.

From John A. Bryan, U. S. Chargé d'Affaires, Peru, Norfolk, Virginia, November 22, 1844: Asking to be furnished with copies of the publications of the Institute, before his departure for Lima.

From Wm. P. Murray, New York, November 26, 1844.

From David Myerle, Washington, December 4, 1844.

From Mrs. Anne J. Deas, New York, November 6, 1844.

Letters and communications, acknowledging letters of appointment as members of the Institute, commenting favorably on its objects and publications, presenting and offering donations and contributions of various kinds, making important suggestions, and promising future aid, &c., &c., &c., have been received, from

Don Manuel Balnes, *President of Chile.*
D. Pantaleoni, M. D., *Rome.*
Joaquim Prieto, *Ex-President of Chile, Valparaiso.*
J. J. Cheneviere, M. D., *Geneva, Switzerland.*
Charles Branca, M. D., *Milan.*
E. Alletz, *Consul General of France, for Genoa.*
Manuel Montt, *St. Jago de Chile.*
Thomas Jeffreys, M. D., *Liverpool.*
E. O. Kendall, *Philadelphia.*
J. Lawrence Smith, *Charleston, S. C.*
M. Berangor, *Paris.*

M. St. Marc Girardin, *Paris.*
M. Achille Collas, *Paris.*
M. Leon Vidal, *Paris.*
Le Chev. Artaud de Montor, *Paris.*
M. Jussieu, *Paris.*
M. Le Bas, *Directeur du Musée Naval, &c., Paris.*
M. Nisard, *Paris.*
M. H. Passy, *Peer of France, &c., &c.*
M. Vivien, *Member of Chamber of Deputies, &c., &c.*
M. Jomard, *Member of Institute of France, &c., &c.*
M. Duverzier, *Paris.*
M. Duchesne, *Paris.*
M. Danton, *Paris.*
M. Brogniard, *Paris.*
M. E. de Girardin, *Member of Chamber of Deputies, &c., &c.*
M. Pardepus, *Member of the Institute of France, &c., &c.*
M. V. Broglie.
M. Vitet, *Member of the Institute of France, &c.*
M. G. de Beaumont, *Member of the Institute of France, &c.*
M. Count de Segur, *Member of the In- of France, &c.*
M. Lacheverdiere.
Count d'Angeville, *Deputy, &c.*
M. A. Moreau de Jonnés.
M. Augustin Thierry.
M. J. de St. Hillaire, *Admin. Royal Museum, &c., &c.*
Count de Rambuteau.
M. A. Bory.
M. W. S. Browning.
M. P. B. Webb.
M. Elie de Beaumont.
M. Cordier, *Peer of France, &c., &c.*
M. Schnitzler.
M. M. N. S. Guillon, *Bishop of Morocco, &c.*
M. A. Villemain, *Minister of Public Instruction, &c.*
M. Alexis de Tocqueville.
M. Horace Say.
M. Leroux.
M. Mignet, *Perpetual Secretary to the Institute of France.*
M. Chev. Galle, *Member of the Institute of France.*
M. Gatteaux, &c.

The Corresponding Secretary offered the following resolution, which was, on motion, unanimously adopted:

Resolved, That a committee of six persons be appointed by the Chair to prepare a memorial to Congress in behalf of the National Institute, to be accompanied by a copy of the memorials which were presented at the last session; and that the committee request the Hon. Levi Woodbury to present it to the Senate, and the Hon. John Quincy Adams to present it to the House of Representatives, at the present session.

Whereupon, the Chair appointed the following gentlemen to constitute the committee: Col. J. J. Abert, John T. Sullivan, Dr. Sewall, Dr. Thomas, Messrs. Seaton, and J. C. Brent.

The Corresponding Secretary offered the following resolution, which was adopted:

Resolved, That a committee of three persons be appointed by the Chair, for the purpose of calling upon the Hon. Levi Woodbury, of the United States Senate, and ascertaining when it will be agreeable and convenient for him to deliver the Annual Discourse before the National Institute.

Stated Meeting, January 13, 1845.

Lieut. Maury submitted a manuscript work, entitled "Navigation Improved," by J. Mills Brown, of New York, the object and use of which he explained. It was referred to a special committee.

Special Public Meeting, held in the Hall of the House of Representatives, January 14, 1845.

The Hon. Levi Woodbury delivered the Annual Address, to a large and highly intelligent audience. After its conclusion, on motion of Richard S. Coxe, Esq., Mr. W. W. Seaton was called to the chair, and John K. Townsend was chosen Secretary.

On motion of Richard S. Coxe, Esq., it was unanimously resolved, That the thanks of the National Institute be presented to the Hon. Mr. Woodbury, for the able and interesting address delivered this evening, and that a copy be requested for publication.

On the 16th instant, the following reply was received from the Hon. Mr. Woodbury, accompanied by a copy of the address:

GENTLEMEN: I feel much obliged by the kind manner in which you request a copy of my recent address; and, though conscious of many imperfections in it, consider myself bound to place it at your disposal.

Respectfully, LEVI WOODBUBY.

To the Members of the National Institute.

Annual Meeting, January 29, 1845.

Col. Abert informed the meeting that he had recently received a letter from the President of the Institute, Hon. Joel R. Poinsett, suggesting the propriety of electing a presiding officer in his stead, as, for various reasons, he felt himself unable to render such services to the Institute as he could wish, and which such an officer, properly selected, should have it in his power to render.

The meeting then proceeded to ballot for officers to serve the Institute during the ensuing year, and the tellers reported the following gentlemen duly elected:

For President.

HON. LEVI WOODBURY.

For Vice President.

PETER FORCE.

For Corresponding Secretary.

FRANCIS MARKOE, JR.

For Recording Secretary.

JOHN K. TOWNSEND.

For Treasurer.

GEORGE W. RIGGS, JR.

For Directors on the part of the Institute.

Hon. R. J. Walker.
Col. J. J. Abert.
Col. Joseph G. Totten.
Lieut. M. F. Maury.
Aaron O. Dayton.
Alex. Dallas Bache, L. L. D.

On motion of Col. J. J. Abert, the Hon. Joel R. Poinsett, late President, was unanimously elected an honorary member of the Institute.

Stated Meeting, February 10, 1845.

The Hon. Levi Woodbury, President, in the Chair.

The Corresponding Secretary announced the following contributions and deposites:

For the Cabinet.

Model of a Grecian Temple, Girgenti.—*From Commodore John B. Nicholson, United States Navy.*
Box, containing an enormous Lady's Comb, from Brazil.—*From G. R. Barry, United States Navy.*
Package of Minerals, from Coal Mines near Glasgow.—*From H. J. Brent, United States Consul, Ravenna.*
Box of Minerals, &c., of Chile.—*From M. Carvallo.*
Fossils, from Pontotoc County, Mississippi.—*From R. H. M. Bradford.*
Collection of Coins, Medals, &c.—*From Mrs. Anne Izard Deas.*
Collection of Coins, &c., eight hundred and fifty-three Copper, thirteen Silver.—*From*
Medal, Head of J. Fennimore Cooper: "The personification of honor, truth, and justice;" reverse, "To J. Fennimore Cooper, the offering of a grateful heart, for his disinterested vindication of his brother sailor, Jesse D. Elliott."—*From Commodore J. D. Elliott.*
Engraving of the Sarcophagus brought from Syria by Commodore Elliott.—*From Commodore Elliott.*

For the Library.

La Pologne, Historique, Litteraire, Monumentale et Illustrée, &c., &c., by Leonard Chodzko, &c., &c., (third edition,) folio; Paris, 1843.—*From the Author.*
Collection de Chroniques Belges, inédites, Monuments pour servir

à l'Histoire des Provinces de Namur, de Hainaut, et de Luxembourg, publiés par le Baron Reiffenberg, tom. 1, 1844; Bruxelles, quarto.—*From Baron de Reiffenberg.*

Chronological Introduction to the History of the Church, &c., &c., by the Rev. S. Jarvis, D. D., L. L. D.; London, octavo, 1844.—*From R. K. Haight, New York.*

Rudiments de la Langue Arabe, de Thomas Erpénius, traduits en Français, accompagnés de Notes, et suivis d'un Supplement indiquant les Differences entre le Langage Litteral et la Langage Vulgaire, par A. E. Hébert, Capitaine du Génie; Paris, 1844, octavo.—Dictionnaire Francais-Berbère, (dialecte écrit et parlé par les Kabaïles de la Division d'Alger,) Ouvrage composé par ordre de M. le Ministre de la Guerre; Paris, 1844.—*From the Minister of War, through His Excellency M. Pageot, Minister Plenipotentiary of France, near the Government of the United States.*

Final Report on the Geology and Mineralogy of New Hampshire, &c., by C. T. Jackson, M. D., quarto, 1844.—*From Dr. Jackson.*

Itinerario da Napoli à Lecce e nella Provincia di Terra d'Otranto, nell' Anno 1818, di Giuseppe, Ceva Grimaldi; Napoli, 1821, octavo.—Considerazioni sulle Publiche Opere della Sicilia di qua' dal faro dai Normanni Sino, ai nostri Tempi, di Giuseppe Ceva Grimaldi; Napoli, 1839, octavo.—*From the Author.*

Principles of Human Physiology, &c., by Wm. B. Carpenter, M. D., F. R. S.; London, 1844.—*From the Author.*

Osservazioni sulla Epizoozia dei Bovi, del 1833, 1834, &c., di Sig. Vincenzo, 1834.—Saggio di Ematalloscopia, &c.; Firenze, 1844. —Memorie tre, Lette al Congresso di Pisa, Torina, e Lucca, di O. Linoli; Lucca, 1844.—Memoria Ovologica, &c., &c., del Dottore G. Rivelli di Bologna; Fano, 1840.—And various other books, &c.—*From C. Edwards Lester, United States Consul, Genoa.*

Report of the Superintendent of the Coast Survey, showing the progress of the work during the year ending November, 1844, Senate Document.—*From A. D. Bache, Superintendent.*

Memoir of William Maclure, Esq., late President of the Academy of Natural Sciences of Philadelphia, by Dr. S. G. Morton, 1844.—*From Dr. Morton.*

Address of Commodore J. D. Elliott, United States Navy, delivered in Washington County, Maryland, to his early companions, at their request, November 24, 1843.—*From Commodore Elliott.*

First Discourse before the Maryland Historical Society, June 20, 1844, by C. F. Mayer.—*From the Society.*

Report on the Meteorology of Toronto, by Lieut. Col. Edward Sabine, R. A., F. R. S.; London, 1845.—*From the Author.*

An Inquiry into the Distinctive Characteristics of the Aboriginal

Race of America, by Dr. S. G. Morton; Philadelphia, 1844.—*From Dr. Morton.*

Inaugural Address before the Mechanics' Institute, by J. J. Mapes; New York, 1845.—*From the Institute.*

Sixth Annual Report, Ohio Lunatic Asylum, 1844.—*From Dr. W. M. Awl.*

Discourse before the Society of the Sons of New England, by Samuel Breck, President; Philadelphia, 1844.—*From Mr. Breck.*

Proceedings of American Philosophical Society, to December 1844. —*From the Society.*

Proceedings of the Academy of Natural Sciences of Philadelphia, to December, 1844.—*From the Society.*

Bermuda Royal Gazette, &c., &c.—*From Gov. Reid, Bermuda.*

Mémoires Couronnés et Mémoires des Savants Etrangers, publiés par l'Academie Royal des Sciences et Belles-Lettres de Bruxelles, tome XVI, 1843, quarto, 1844.—Recherches Statistiques, par A. Quetelet; Bruxelles, 1844; quarto.—Observations des Phénomènes Périodiques; Bruxelles.—Bulletin de l'Academie Royal des Sciences et Belles-Lettres, tome 10, Nos. 8, 9, 10, 11, 12, 1843; tome XI, Nos. 1, 2, 3, 4, 5, 6, 7, 8, 1844.—Annales de l'Observatoire Royale de Bruxelles, publiées, aux frais de l'état, par le Directeur, A. Quetelet, tom. III; Bruxelles, 1844.—Annuaire de l'Academie Royale, &c.; Bruxelles, 1844; duodecimo. *From A. Quetelet.*

Programme des Questions Proposées, pour le Concours de 1845, par l'Academie des Sciences.—*From*

Abstract of Correspondence.

Letters—

To Commodore J. D. Elliott, U. S. Navy, January 17, 1845: Thanking him for a present to the Institute.

To Hon. J. Vanmeter, House of Representatives, January 24, 1845: Acknowledging $5, as his subscription, sent by E. H. Davis, of Chillicothe, for the volume of proceedings of the Institute about to be published.

Letters and Communications.

From L. B. Chodzko, Paris, June 15, 1844: Presenting a superb illustrated copy of his work on Poland, &c.

From T. Monticelli, Perpetual Secretary of the Academy of Sciences, Naples, August 22, 1844: Will forward certain volumes of the Academy, &c., &c.

From J. C. Pickett, American Chargé d'Affaires, Lima, Peru, August 5, 1844: On the character and fate of Major Andre, &c.

From the same, September 30, 1844: Third letter on the subject of a canal communication between the Atlantic and Pacific oceans.

From John R. Peters, Canton, China, September 18, 1844: Expressing regret that the American mission was not able to visit the interior of China; gunpowder, the magnetic needle, printing, the art of making porcelain, &c., &c., due to the Chinese, &c.

From Baron de Reiffenberg, Secretary Royal Commission of History, &c., &c., &c., Brussels, September 20, 1844: Presenting a continuation of the Chronique Belge, and expressing a wish to become a member of the National Institute.

From Professor Pietro Parodi, Milan, September 29, 1844: On the scientific meetings of Italians, &c.

From Boyd Reilly, M. D., Constantinople, October 16, 1844: Forwarding various presents to the Institute, &c.

From M. Giuseppe Canale, &c., &c., Genoa, October 18, 1844: Acknowledging membership, with thanks, and will present soon to the Institute, a copy of his civil, commercial, and literary history of the Genoese, as soon as it shall be completed.

From C. Edwards Lester, U. S. Consul, Genoa, October 22, 1844: Acknowledging and transmitting letters and various papers presented to the late meeting of Savans, at Genoa, a full copy of which he will forward soon.

From Commodore John B. Nicholson, U. S. Navy, November 8, 1844: Presenting model of a Grecian temple, &c.

From Petty Vaughan, London, November 19, 1844: Enclosing bill of lading for a case of books, containing certain volumes of transactions of the Society of Arts.

From A. Vattemare, Paris, November 12, 15, 20, 1844: On a variety of subjects connected with the Institute, &c.

From G. R. Barry, U. S. Navy, Rio Janeiro, November 20, 1844: Sending a box containing a present for the Institute.

From C. Edwards Lester, U. S. Consul, Genoa, November 26, 1844: Transmitting a communication from Professor Parodi, &c.

From P. Vaughan, London, December 3, 1844.

From R. & H. Haight, New York, December 4, 1844: Presenting a valuable work, in the name of R. K. Haight.

From A. Vattemare, Paris, 1844.

From D. Groux, New York, December 13, 1844: Announcing his arrival in New York, and renewing the offers formerly made by him through the American Consul at Marseilles, to transfer his numismatic cabinet to the Institute, &c.

From J. C. Brent, Washington, December 18, 1844.

From Joseph Johnson, Charleston, South Carolina, December 21, 1844: Has prepared a biography of Capt. J. Blakely, United States Navy, for the Institute, &c.

From A. Vattemare, Paris, December 26, 1844: Stating that he has forwarded, via Havre, a large box, containing eighty-six volumes, and thirty-one medals, presented by eminent men in France, and will forward by next packet the Journal des Savans, and other works; has

sent by same opportunity a large number of volumes, engravings, medals, &c., for several States of the Union, &c., &c., &c.

From Professor J. H. Agnew, New York, January 6, 1844: Respecting the April meeting.

From Professor B. Hallowell, Rockland, Maryland, January 9, 1845.

From Dr. J. H. Causten, Jr., Washington, January 10, 1845: Presenting, in the name of Manuel Carvallo, of Chile, a choice collection of minerals.

From C. A. Bradford, Washington, January 13, 1845: Presenting, in the name of his son, R. H. M. Bradford, certain fossils, found by him, in Pontotoc County, Mississippi.

From James Higgins, Anne Arundel County, Maryland, January 14, 1845.

From John C. Brent, January 18, 1845.

From E. H. Davis, Chillicothe, January 20, 1845: Enclosing money.

From Samuel Webber, M. D., Charleston, New Hampshire, January 27, 1845: Transmitting a paper on "Purpura urticans," to be referred to the Medical Department.

From Commodore J. D. Elliott, Philadelphia, January 28, 1845.

From Rev. Bishop Hughes, New York, February 8, 1845: Stating that he has forwarded by express line, a box for the Institute, from Vienna.

From H. K. Bull, Corresponding Secretary Mercantile Library Association, New York, February 8, 1845: Acknowledging the receipt of the publications of the Institute, &c.

From Commodore J. D. Elliott, Philadelphia, February 8, 1845: Offering to deposit a curious sarcophagus, inscribed with hieroglyphics, which he bought at Beyroot, brought home in the frigate Constitution, and expressing the wish that on the death of Gen. Jackson it may be appropriated to the purpose of receiving his remains.

From His Excellency A. Pageot, Minister Plenipotentiary of France, Washington, February 12, 1844: Announcing that the French Minister of War had transmitted copies of two works published by his Department, which, at the instance, and in the name of the Minister, he presents to the National Institute.

From Gregorio Romero Larrañaga, Secretary Literary Society of the Lyceum of Madrid, December 16, 1844: Transmitting copies of a work by himself, to the plan of which he asks the patronage of the National Institute, &c.

From Commodore J. D. Elliott, U. S. Navy, Philadelphia, February 7, 1845.

From Rev. R. Davidson, New Brunswick, February 10, 1845.

From Hon. R. C. Schenck, House of Representatives, February 10, 1845.

From P. McCall, Mayor of Philadelphia, February 4, 1845.

From W. B. Sinclair, U. S. Navy, Norfolk, January 29, 1845.

From Baron Charles Dupin, Paris, August 4, 1844.

From G. Ceva Grimaldi, &c., &c., Naples, August 6, 1844.

From M. Antoine de St. Joseph, &c., &c., Paris, August 18, 1844.

From M. Bouillet, &c., &c., Paris, August 20, 1844.

From M. Blonqui, &c., &c., Paris, September 31, 1844.

From M. Domard, &c., &c., Paris, September 30, 1844.

From M. Barrois, &c., &c., Paris, October 10, 1844.

From M. Macarel, &c., &c., Paris, October 16, 1844.

From M. Naudet, &c., &c., Paris, October 20, 1844.

From Baron Walkenaer, &c., &c., Paris, December 1, 1844.

From M. Quetelet, Astronomer Royal, and Perpetual Secretary of the Academy of Sciences of Brussels, October 10, 1844: Transmitting various publications of the Royal Academy, &c.

From Hon. Joel R. Poinsett, late President of the Institute, Peedee, South Carolina, February 10, 1845: Acknowledging honorary membership, &c.

The Recording Secretary informed the meeting that he had received letters of acknowledgement from several of the officers elected at the annual meeting, and read the following from the President of the Institute:

WASHINGTON, *January* 31, 1845.

DEAR SIR: I thank you for the obliging manner in which my election as President of the National Institute has been communicated by you, and beg leave to assure its members that I highly appreciate this mark of their confidence, and will be happy to serve them, whenever in my power.

Respectfully, LEVI WOODBURY.

To JOHN K. TOWNSEND, Esq., *Recording Secretary National Institute*.

Mr. Coffin, on behalf of the special committee appointed at last meeting on Mr. Brown's paper, entitled "Navigation Improved," made a report, which was adopted.

MEMORIAL

OF THE

NATIONAL INSTITUTE.

To the Honorable the Senate and House of Representatives of the United States of America.

The memorial and petition of the "National Institute for the Promotion of Science and the Arts," respectfully represent:

That its members have been induced, by a high sense of the duty to the body whose interests they represent, as well as to the great objects which it was the design of its creation to promote, to submit to the consideration of your honorable bodies, a statement of the origin and progress, of the past and present condition, and of the wants and exigencies, of the Institute.

The Congress of the Union, after a full investigation of the subject, after duly estimating the value and importance of the design of its founders, and the means which it contemplated to employ in the accomplishment of those ends, deemed them so far entitled to its countenance and favor as to grant to the Institute a charter of incorporation. Some pecuniary aid incidentally followed, and it was made the custodier of much valuable property belonging to the Government. This charter, whose date is recent, naturally afforded the hope of national protection, thus inspiring every where confidence, the moment it was seen, by the acts of Government, that confidence was felt at home.

Under these auspices, the National Institute began its career. Many of the most distinguished and illustrious individuals in the nation afforded it their aid and encouragement.

Its active members were chiefly composed of officers of Government and citizens of Washington, who, occupied in their own private concerns, neither men of wealth nor mere scholars, proposed to give a portion of their leisure to promote objects in which they had no other or ulterior motives and interest than such as were common to the nation, and, perhaps, to the whole human family.

These individuals have, so far, advanced with a success which they could little have anticipated, and they now approach the legislature of the Union, and the nation at large, with the fruits of their labors in their hands, spreading before those whose interests they have undertaken to advance, the results which in so brief a space of time they have accomplished, asking that their deeds should be examined and compared with their promises, and if they have performed their duty faithfully, and discharged the trusts confided to them honorably, zealously, and successfully, that they may be encouraged by the only reward they have ever sought, viz: the means of enlarging and giving additional efficiency to their patriotic efforts and purposes. They appear before your honorable bodies to render an account of their stewardship, and they solicit an examination of their proceedings.

In urging this matter upon Congress, it is not the design of your memorialists to present a formal argument to establish, either the constitutional authority of your honorable bodies to confer upon the National Institute that pecuniary aid which they so urgently need, or the expediency of so applying any portion of the public patronage. They believe that Congress is fully competent to the ascertainment and decision of all questions of this character. While, therefore, your memorialists abstain from entering into any discussion of constitutional questions, submitting, with the most respectful deference, to the judgment of your honorable bodies, they feel that they are, in no manner, trenching upon this ground, in exhibiting fully and distinctly, those facts and circumstances which will furnish the general data upon which Congress is to decide.

The National Institute is composed of private individuals, with no other bond of connection than *their common labors as trustees of certain property for the public and the Government*—a common feeling of interest in promoting scientific and useful information, and the bond of union bestowed upon them by Congress in their charter of incorporation. In effecting the designs of their association, they have established an extensive correspondence with influential and useful men, men of experience, of letters, and of distinguished scientific attainments, not only throughout the Union, but throughout the world. In every part of Europe, and of the American continent, in Asia, and in Africa, we find generous and enthusiastic friends and corresponding members; foreign Governments have evinced their interest by valuable contributions, and many of the most distinguished Institutions and Societies abroad are correspondents and contributors. An aggregate amount of munificence, zeal, learning, and adventitious advantage is thus possessed by the Institute, which has already yielded substantial results, and holds out assurances of the richest fruits. In further illustration of the advantages which are here imperfectly sketched, we submit for the examination of your honorable bodies, a communication lately received from Paris, with accompanying documents and transactions, exhibiting, in a remarkable manner and degree, evidences of interest and good will towards Congress, towards the States, and towards the Institute, on the part of the Government and people of France.

Through this wide-spread instrumentality, the Institute has labored to form an extensive library and museum, or collection of objects of natural history, a repertorium of facts and contributions to science, documents illustrating history in general, but in an emphatic manner that of our own continent, and specimens of the fine arts, of mechanic ingenuity, valuable productions of the vegetable kingdom, and materials illustrating the moral and social condition of nations generally, but, in a more especial manner, of our own. From every quarter of the globe valuable and various contributions have been transmitted to us. The gallant officers of our army and navy; the diplomatic and consular representatives of the Government abroad, the men of learning and science every where, have entered with the most praiseworthy zeal in the cause, and vied with each other in the number and value of their contributions.

The collection thus made is not designed for, or appropriated to, the exclusive use of the Institute, or of any particular class of individuals. It is opened gratuitously and daily to the inspection and for the benefit of all. Without cost, the student of natural history may here find ample means of improvement in that department of science to which his attention has been directed; without cost, the geologist and mineralogist are furnished with abundant materials for prosecuting their researches; the curious may indulge their predilections, while the man of science is enabled to peruse the valuable contributions from learned societies and individuals throughout the world.

In addition to these materials, thus accumulated by the labors of the Institute itself, the convenience of the Government has made it the depository and guardian of numerous articles of its own property, which are thus exhibited to the public eye without trouble to the ordinary officers in the various Departments, and without the consequent abstraction of their time from more peculiar and appropriate duties. The interesting collections of Indian portraits and curiosities formerly deposited in the War Department; the objects of curiosity, and various donations to the Government or to distinguished citizens from foreign countries, once in the State Department, are here shown to the public in connection with much other public property.

The articles arising from these, and from various other sources which it would be tedious to enumerate, already in the custody of the Institute, are of great value, and they are increasing with rapidity, and accumulating to an indefinite extent.

The real owners of these treasures are the Government and the nation. The individual members of the Institute contemplated no interest or property in them, beside their trust for the public, beyond what is enjoyed by every citizen in the land, or indeed every stranger who may feel disposed to use them as a means of indulging a liberal curiosity, or gratifying his love of science. Such of the articles as at any time belonged to the Government, remain its absolute and exclusive property. They are simply entrusted to the Institute for safe-keeping and public exhibition, and may be withdrawn whenever it shall suit the wishes of the owners to dispose of them in any other manner. The donations by individuals and public

bodies to the Institute are substantially in the same predicament. So long as this corporate association exists, it has the charge, custody, and control of it, as trustee for the Government; but upon the dissolution of the Institute, the entire mass becomes equally, as the other branch of the collection, the absolute and exclusive property of the nation. In the mean time, the members wish for no private interest in the collection, and if the present charter be not susceptible of the construction, that the whole beneficial interest of all the articles is now, as well as at its close, in the Government, they are anxious to have an amendment made to accompany the appropriation asked for, which shall, at once, regulate the property in that way. For the Institute has depended on the Government heretofore, and must continue to rely on it, not only for many of the most valuable articles in its possession, but for a place to deposit them, and a place for their meetings, as well as for some of the means to defray the incidental expenses of opening, putting up, and preserving their collections. In short, all the property belongs to the Government. The guardians of it, under the charter, are chiefly the officers of the Government. The custody of such property was heretofore at the public expense. And that such sums should still be expended by Congress as would pay for the freight and other expenditures connected with it, would be the exercise of no other power than such as has been exercised by the Government every year since its organization.

The individuals who compose the Institute, have, by their pecuniary contributions and specific donations, largely aided in augmenting the value of this property, in arranging it so as to render it available, and in defraying the expenses necessarily attending the execution of the important and responsible trusts confided to them. They have thus created, enlarged, and rendered practically useful, the property of the Government, and of the nation. Their means of usefulness, their capacity to extend the benefits of the museum, are limited only by their capacity to meet their daily expenses.

Not only are the Government and the nation the absolute owners of much of the property of the Institute, and the beneficiary owners of the residue, but they are also the exclusive recipients of the advantage to result from the entire enterprize. At this period of the world, and in this enlightened age, it is not necessary to present an argument to establish a truth which all history inculcates, that the highest glory of a nation, the purest and most durable happiness of a commonwealth, rest most upon a moral and intellectual advancement.

If, in the legitimate execution of those powers which by the constitution are vested in your honorable bodies, collateral results should follow, by which science and literature shall be fostered and encouraged among your constituents, and diffused more widely through our Union, such consequences will not, we presume, furnish grounds of objection to the rightful exercise of power, in the breast of any individual. It is believed that few are disposed to controvert the lawfulness, while a still smaller number will deny the expediency, of the appropriations heretofore made by Congress to the literary and benevolent associations of this district and city. None can doubt the lawfulness of those provisions which have been, from time to time, made for the protection of the property of the nation, and its adequate security and care, by the erection of suitable buildings for its accommodation, and furnishing proper compensation to the officers or agents of the Government charged with its preservation and improvement.

All the Institute asks of Congress, then, is an appropriation of a sum sufficient to discharge the arrears of expense heretofore incurred, and due by the Institute An annual appropriation for the necessary purposes of the Association, and the continuance of the indulgence hitherto granted, of the use of convenient rooms for preserving the property, and holding the ordinary meetings.

Annexed to this memorial are various documents, of which the following is a list:

List of Documents accompanying the above Memorial.

1. Charter of Incorporation.
2. Constitution and By-Laws.
3. Abstract of Proceedings, comprising the contributions, donations, and deposits made to the cabinet and library of the Institute since its foundation, with the names of the contributors, donors, and depositers.
4. List of Officers, and Honorary, Resident, Paying Corresponding, and Corres-

ponding Members, and of the Societies, Institutions, &c., at home and abroad, in correspondence with the National Institute.

PETER FORCE, *Vice President.*
FRANCIS MARKOE, Jr., *Corresponding Sec'y.*
JOHN K. TOWNSEND, *Recording Secretary.*
GEORGE W. RIGGS, Jr., *Treasurer.*

JOHN C. SPENCER,
JOHN NELSON,
WM. WILKINS,
C. A. WICKLIFFE,
} *Directors, ex-officio, on the part of the Government.*

LEVI WOODBURY,
R. J. WALKER,
J. J. ABERT,
JOSEPH G. TOTTEN,
A. O. DAYTON,
M. F. MAURY,
} *Directors on the part of the National Institute.*

Washington City, *March* 18, 1844.

MEMORIAL OF THE FRIENDS OF SCIENCE WHO ATTENTED THE APRIL MEETING OF THE NATIONAL INSTITUTE.

To the Congress of the United States.—The respectful Memorial of the friends of Science, assembled at the City of Washington, from various parts of the Union.

The undersigned have come together at the capital of the United States, at the call of the National Institute for the Promotion of Science, with the purpose of communicating to each other the facts and reasonings in science which each one's research might have suggested, and of interchanging views and opinions in regard to the progress of science in our country.

While engrossed in this delightful and most profitable communion, we have had an opportunity to observe the results of the efforts made by the members of the National Institute for the advancement of science. Founded only four years since, they have already brought together valuable collections in natural history and in the arts. Connecting themselves with the Government, through the heads of Departments, who, by virtue of their offices, are directors of the Institute, they have voluntarily imposed restraints upon the operations of the Institute, which will preserve its national character, and prevent its being tributary to any local or sectional purpose. By making the Institute merely a trustee for the United States of the property which it possesses, and may hereafter acquire, they have proved that no sordid or interested views guided them in framing their constitution. The zeal and industry shown in making collections, the disinterestedness in the disposition of them, would seem to deserve from the Government of the republic approval and encouragement. The value of the property already collected, although the existence of the Institute has been so short, is very great. And yet it has no building for the convenient exhibition of its treasures, or even for their safe keeping. And if articles of so much interest and value have already been collected, what may not be expected from the army, the navy, and friends of science generally, in the long reach of years to come, if a suitable place can be provided for their preservation and exhibition. But how are the means of providing such a building to be obtained? If attained at all for such a purpose by voluntary contributions, it could only be in the midst of large and flourishing communities. Local feelings of interest or pride cannot be transferred, and it is not to be expected that the means to arrange, display, preserve, and augment these collections, can be procured by voluntary contributions of individuals in the District of Columbia, or that they can be procured out of the District. There is no civilized nation, however narrow its policy in other respects, which does not exhibit some measure of interest in promoting the advancement of human knowledge. In most countries science receives direct encouragement, and many Governments have vied with each other in their efforts to advance this cause. The Government of a country emulous to consider itself among the first of enlightened nations, we trust, will not refuse to aid in securing to its capital the benefits of the labors of the Na-

tional Institute. We cordially unite with the resident members of the Institute in asking an appropriation in its behalf from Congress. Our only fear is that in thus requesting aid for the keeping of what in fact is the property of the Government, we may be considered as asking a boon far below that which the country calls for, and that we ought to urge upon the National Legislature a liberal and plenteous endowment for a National Institute; and we are only withheld from doing so by considerations growing out of the present financial condition of the Government. But that which we ask is so entirely within the means of Congress, and the urgency of its application to preserve what has been accumulated, with so much labor and expense, is so great, that we cannot but hope the enlightened and intelligent members of Congress will distinguish the present session by the necessary appropriation of funds to an object so truly national and so truly republican.

ELIPHALET NOTT, *Pres't Union College, Schenectady.*
BENJAMIN F. BUTLER, *New York.*
A. H. EVERETT, *Pres't Jefferson College, Louisiana.*
JAMES TALLMADGE, *President University of New York, and President American Institute, New York.*
JOHN W. DRAPER, *Professor Chemistry, University of New York.*
W. W. MATHER, *Professor Natural Sciences, Ohio University, Athens, Ohio.*
L. R. WILLIAMS, *Professor Natural Philosophy, and Chemistry, Jefferson College.*
C. GILL, *Professor Mathematics, St. Paul's College, Flushing, New York.*
JOHN W. DUNBAR, M. D., *Prof. University Maryland.*
W. A. NORTON, *Prof. Mathematics and Natural Philosophy, Delaware College, Easton, Pennsylvania.*
JOHN W. YEOMANS, *Pres't Lafayette College, Penn.*
JOHN LOCKE, *Prof. Chemistry, Medical College, Ohio.*
HENRY R. SCHOOLCRAFT, *Delegate New York Historical Society.*
W. R. ABBOTT, *Pres't Georgetown Library Association.*
GRAFTON TYLER, M. D., *Georgetown, D. C.*
RICHARD S. McCULLOH, *Professor Mathematics and Natural Philosophy, Jefferson College, Maryland.*
JOHN ELGAR, *Montgomery County, Maryland.*
FRANCIS J. GRUND, *Philadelphia.*
A. D. CHALONER, M. D., *Philadelphia.*
S. C. DONALDSON, *Baltimore, Maryland.*
JAMES CURLEY, *Professor Georgetown College.*
ALEXIS CASWELL, *Professor Brown University, Rhode Island.*
JAMES P. ESPY.
EDWARD A. COOK, *New York.*
A. TALCOTT, *Connecticut.*
WM. STRICKLAND, *Philadelphia.*
BENJAMIN HALLOWELL, *Maryland.*
HECTOR HUMPHREYS, *President St. John's College, Annapolis, Maryland.*
GEORGE TUCKER, *Professor University of Virginia.*
JAMES PRENTISS, *New York.*
RICHARD PETERS, *Philadelphia.*
R. M. PATTERSON, *Philadelphia.*
SAMUEL HAZARD, *Philadelphia.*
ELIAS LOOMIS, *Prof. Western Reserve College, Ohio.*
CHARLES D. CLEVELAND, *Philadelphia.*
SAMUEL F. B. MORSE, *New York.*
RICHARD RUSH, *Philadelphia.*
EDWARD HITCHCOCK, *Prof. Amherst College, Mass.*

WASHINGTON, D. C., *April*, 1844.

CHARTER OF INCORPORATION.

AN ACT to incorporate a Society in the District of Columbia, by the name of the National Institute for the Promotion of Science.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That Peter Force, Francis Markoe, Jr., Garrett R. Barry, William J. Stone, Daniel Webster, Walter Forward, John C. Spencer, Abel P. Upshur, Charles A. Wickliffe, Hugh S. Legare, John Q. Adams, William C. Preston, John J. Abert, Joseph G. Totten, Aaron O. Dayton, Lewis Warrington, and all others now members of the Society in the District of Columbia known by the name of "The National Institution for the Promotion of Science," and their successors and associates, duly elected in the manner provided for in their constitution, hereinafter mentioned, as it now exists, or as it may be hereafter altered and amended by the Society herein and hereby incorporated, shall be, and they are hereby, incorporated, constituted, and declared to be a body politic and corporate, by the name of "The National Institute for the Promotion of Science."

SEC. 2. *And be it further enacted*, That all and singular the goods, chattels, property, and effects, heretofore given, granted, devised, or bequeathed to the said Society, or that may have been purchased for its use, or which are, or may be held in trust for it, shall be, and the same are hereby, vested in and confirmed to the said corporation hereby created; and the said corporation is hereby authorized and empowered to take or receive any sum or sums of money, or any goods, chattels, property, or effects of any kind or nature whatsoever, which shall or may hereafter be given, granted, devised or bequeathed to the said corporation, or in trust for the said corporation, by any person or persons, body politic or corporate, capable of making such gift, bequest, or devise: *Provided always*, That such money, goods, chattels, property, or effects, be laid out or disposed of, for the use or benefit of the said corporation, according to the intention of the donors or devisors.

SEC. 3. *And be it further enacted*, That all obligations, agreements, and contracts, heretofore entered into, by or with the said Society, or any of its duly authorized agents, shall be as valid and obligatory upon the respective parties, and upon the corporation hereby created. as if the said Society had been incorporated and existed as a corporation at the time and times of entering into such obligations, agreements, and contracts. And the said corporation shall be liable, to all persons and bodies politic and corporate, for all goods, chattels, and effects, heretofore specially deposited with the said Society for safe keeping or exhibition, or which may be hereafter so deposited with the said corporation, according to the terms of the deposit. And all the property of the said corporation, at the time of the expiration or dissolution of its charter, shall belong to and devolve upon the United States; and the President of the United States for the time being shall appoint a person or persons to take possession of, and keep and preserve the same, unless and until Congress shall otherwise dispose of the same.

SEC. 4. *And be it further enacted*, That the constitution heretofore adopted by the said Society, and as it now exists, and as it may hereafter, from time to time, be altered and amended in the manner therein provided for, shall be valid and binding upon the members of the said corporation.

SEC. 5. *And be it further enacted*, That the corporation hereby created shall have power to sue and be sued in its corporate name; and to appear, prosecute, and defend, to final judgment and execution, in all courts in the District of Columbia and elsewhere; to have and use a common seal, and the same to break, alter, and renew, at will; to elect, according to their said constitution and by-laws, as the same may from time to time exist, all such officers as they may deem necessary and proper, and ascertain their duties and compensation; to make, from time to time, by-laws and regulations (not inconsistent with the laws of the United States in force in the District of Columbia) for their government, and for the due and orderly conducting of their affairs, and the management of their property, and to enforce the same by penalties not exceeding twenty dollars for any one offence, to be recovered before a justice of the peace, in the same manner as other small debts are recovered: *Provided*, That it shall not be lawful for the corporation to deal or trade in the manner of a bank, nor to issue any note in the nature of a bank note.

SEC. 6. *And be it further enacted*, That this charter shall continue in force for the period of twenty years from the date of this act, and no longer, unless Congress shall by law prolong its existence; but its expiration or dissolution shall not abate any suit then pending by or against the said corporation; and three years thereafter shall be allowed, in which it may wind up its affairs, and in which its corporate name may be used for the recovery of all debts due to or by the said corporation: *Provided*, That Congress may at any time alter, repeal, or modify this act of incorporation.

APPROVED, *July* 27, 1842.

CONSTITUTION AND BY-LAWS.

CONSTITUTION.

ART. I. The Society shall be named "THE NATIONAL INSTITUTE FOR THE PROMOTION OF SCIENCE."

ART. II. It shall hold its meetings in the City of Washington.

ART. III. It shall be composed of Resident, Corresponding, and Honorary Members.

ART. IV. The Resident members shall be persons residing in the District of Columbia; Corresponding members shall be persons residing out of the District of Columbia who wish to aid the Institute by their contributions or communications; and the class of Honorary members shall be composed of eminent men residing out of the District of Columbia.

ART. V. Resident members removing from the District of Columbia shall, on request, be transferred to the list of Corresponding members, and *vice versa*. But Corresponding members may, at their option, be recorded and considered as Resident members.

ART. VI. The Officers of the Institute shall consist of a President, Vice President, twelve Directors, a Treasurer, a Corresponding and a Recording Secretary; provided that no member shall hold more than one of the offices created by this article at the same time, but that an acceptance of one shall be considered as a refusal of all others.

ART. VII. The Officers shall constitute a Board of Management of the fiscal concerns of the Institute; and five members of the Board shall be a quorum for the transaction of ordinary business.

ART. VIII. The Secretaries of the Departments of State, Treasury, War, and Navy, and the Attorney General, and Postmaster General of the United States, for the time being, shall, with their consent, be Directors of the Institute; but upon the refusal of one or more of them to accede to the request of the Institute, such Director or Directors shall be chosen in the same manner as is herein provided for the appointment of other officers. The officers shall be elected for the term of one year, or until their successors shall be appointed, from among the resident members of the Institute. This election shall take place at the annual meeting; and each member, who is duly qualified, and shall be present at such meeting, shall have a vote in said election.

ART. IX. The Annual Meeting shall be held on the first Monday in each year, or as soon thereafter as convenient; the stated meetings on the second Monday in each month; and special meetings whenever five resident members shall concur in a request to that effect.

ART. X. The President, Vice President, or, in their absence, one of the Directors, in order of seniority, as named in article VIII, shall preside at all meetings of the Institute; or if neither of them be present, the meeting shall elect its chairman.

ART. XI. The election of members shall be by ballot; and an affirmative vote of two-thirds of the members present at the meeting shall be necessary to the election. The candidate shall be nominated to the Institute at a regular meeting, and ballotted for at the next stated meeting; if there be more candidates than one, they shall be ballotted for separately.

ART. XII. This Constitution shall be signed by all persons present at its adoption, who are desirous of becoming members of the Institute; which signature shall be proof of their membership. Resident members subsequently admitted shall subscribe the same on their admission; and neglect to do so for two months

after their election shall render such election void. Each resident member shall pay to the Treasurer five dollars on his admission; and five dollars on the first Monday of January of each year thereafter, to aid in defraying necessary expenses, and for such other purposes as the Board of Management may direct.

Art. XIII. No resident member shall vote at any stated meeting of the Institute, on any question whatever, who has not paid his subscription and annual dues, or who shall not have attended a meeting of the Institute within one year previous to such meeting.

Art. XIV. The Institute shall have power to appoint Curators and others for the preservation and arrangement of its collections. The resident and corresponding members shall exert themselves to procure specimens of natural history, &c.; and the said specimens shall be placed in the Cabinet, under the superintendence of a Curator or Curators, so appointed. All such specimens, &c., unless deposited specially, shall remain in the Cabinet, and, in case of the dissolution of the Institute, shall become the property of the United States.

Art. XV. The resident members of the Institute shall be divided into such Departments as may hereafter be determined upon. The members composing each department shall especially be charged with the subjects embraced therein, and communicate to the Institute the result of their inquiries; but every member shall have the privilege of making such communications as he may think proper on any subject connected with the designs of the Institute.

Art. XVI. The various collections of the Institute shall be placed in the apartments which may be designed for that purpose by a majority of the Directors.

Art. XVII. This Constitution, with the exceptions of Articles 6, 8, 10, 14, and 16, or so much thereof as relates to the office of Directors, their duties, privileges, or powers, or the purposes or place of keeping of the collections of the Institute, shall be subject to alterations and additions at any meeting of the Institute, provided notice of a motion for such alteration or addition shall have been given and recorded at a preceding regular meeting. No alterations or amendments shall ever be made in the articles above excepted, without the consent of a majority of the Directors.

Art. XVIII. A code of by-laws for the regulation of the business of the Board of Management, and the annual and other meetings of the Institute, and for matters relating to non-attendance, privileges, duties of officers, &c., shall be prepared by a committee to be appointed for that purpose.

BY-LAWS.

ARTICLE I.

Sec. 1. The Recording Secretary shall give at least two weeks notice, in two or more of the newspapers published in the City of Washington, of every annual meeting.

Sec. 2. Stated and special meetings shall be called by or through the Recording Secretary.

Sec. 3. A quorum to do business shall consist of at least ten resident members entitled to a vote.

Sec. 4. A member introducing a stranger shall hand his name and place of residence, in writing, to the presiding officer.

Sec. 5. The order of business at stated meetings shall be as follows, viz: 1. Reading the minutes. 2. Nomination of candidates for membership. 3. Election of candidates. 4. Notice of contributions and deposites. 5. Reading reports and communications—I. From officers of the Board of Management. II. From Departments. III. From Committees. IV. From individual members—(*a.*) Honorary. (*b.*) Corresponding. (*c.*) Resident. 6. Extraordinary business.

Sec. 6. At the annual meeting, the election of officers shall succeed to the reading of reports.

Sec. 7. At special meetings, the object for which the meeting was called shall have precedence of all other matters after the reading of the minutes.

Sec. 8. A suspension of the regular order of business for a specific purpose may, at any time, be had, two-thirds of the resident members present, who are entitled to a vote, concurring therein.

Article II.—*Of Officers.*

Sec. 1. Before entering on his duties, the Treasurer shall give bond to the Trustees in such sum, and with such security, as the Board of Management may deem appropriate for the security of the funds of the Institute, and the faithful discharge of his duties.

Sec. 2. The Treasurer shall keep an account of the receipts and disbursements made by him, and make a report thereof to the Board of Management, at the stated meeting in December annually. His books and papers shall be always open to the inspection (at his office) of the said Board, or any committee that may be appointed by the Institute.

Sec. 3. The Treasurer shall receive all dues, being authorized, hereby, to employ a collector thereof, and shall pay out the money of the Institute upon accounts passed at stated meetings, and not otherwise.

Sec. 4. All money, books, papers, &c., appertaining to the office of the Treasurer, shall be transferred to his successor.

Sec. 5. The Corresponding Secretary shall conduct the correspondence, under the direction of the Institute. All papers, letters, &c., appertaining to his duties shall be subject to the disposal of the Institute; and what may remain in his hands at the end of his term shall be transferred to his successor.

Sec. 6. The Recording Secretary shall keep a journal of the proceedings of the Institute, and also of the Board of Management: shall sign all orders made by either, in attestation of their correctness; call meetings, and, generally, perform such duties as attach to his office; and, at the end of his term, transfer all books, papers, &c., in his possession, belonging to the Institute, to his successor.

Sec. 7. A report shall be made by the Board of Management to the annual meetings, of the general as well as fiscal concerns of the Institute.

Article III.—*Of Expenditures.*

Sec. 1. No expenditure shall be made for, or in the name of the Institute, without its direction.

Article IV.

Sec. 1. All elections shall be made by ballot, and a majority of all the members present entitled to vote shall be necessary for the election of officers.

Sec. 2. Vacancies shall be filled by the Institute at the next meeting after their occurrence.

Article V.—*Of the Departments.*

Sec. 1. The Departments shall consist, for the present, of—1. Chemistry. 2. Geology and Mineralogy. 3. Geography, Astronomy, and Natural Philosophy. 4. Natural History. 5. The Application of Science to the Useful Arts. 6. American History and Antiquities. 7. Agriculture. 8. Literature and the Fine Arts.

Sec. 2. The Institute, at any stated meeting, may add and organize any other department that its wants or condition may justify.

Sec. 3. Every resident member shall join one or more of the departments.

Sec. 4. Each department shall have power to organize and subdivide itself into sections, and make such regulations as may be necessary for its government, provided they do not conflict with the constitution or laws of the Institute.

Sec. 5. Each department shall keep, or cause to be kept, full minutes of its proceedings, and submit the same, or such portion thereof as may promote the cause of science, to the Institute, as often as it may deem proper or as called on to that effect.

Sec. 6. Each department shall have the direction of the arrangement of that portion of the Cabinet, and the Instruments appertaining to it, as relates to the branch of science under the care of such department, subject to the supervision of the United States' Curators.

Sec. 7. Each department shall make an annual report to the Board of Management at the stated meeting in December, embracing its condition, progress, and operations during the year, together with the suggestions for improving its usefulness for the ensuing year.

Article VI.—*Of the Cabinet.*

Sec. 1. Donations made to the Cabinet shall be marked with the name of the donor.

Sec. 2. Specimens may be placed in the Cabinet on special deposite, subject to removal by giving the Institute notice at some stated meeting.

Article VII.

Sec. 1. The Annual and Stated Meetings shall be held at such places as shall be determined upon by the Institute.

Sec. 2. The place of holding a Special Meeting shall be designated by those by whom the said meeting shall be ordered.

LIST OF MEMBERS.

RESIDENT MEMBERS,

Including all who have been elected, and not designating those who have died, resigned, or removed.

Abbott, George J.
Abert, J. J., Corps Top. Engineers
Adams, James
Adams, John Quincy
Agg, John
Allen, Thomas
Anderson, R. P.
Andrews, T. P., U. S. A.
Arnold, ——, M. D.
Bache, George M., U. S. N.
Barclay, James D., M. D.
Barclay, John D.
Barker, J. N.
Barnard, Robert
Barry, Garrett R.
Bender, G.
Bender, Jacob A.
Benné, Francis
Birchard, M.
Blair, Francis Preston
Bohrer, Benjamin S., M. D.
Borrows, J., M. D.
Brackenridge, Wm. Dunlop
Bradley, Wm. A.
Brent, John Carroll
Brent, Thomas W., U. S. N.
Brinley, Francis
Broadhead, John M.
Brown, J. W.
Brown, Rev. O. B.
Bruff, J. G.
Bryan, John A., Assistant Postmaster General
Buck, Marcus C., M. D.
Buckingham, Caleb
Bulfinch, Rev. S. G.
Callaghan, James
Callan, John F.
Carroll, William T.
Carter, J., (Georgetown)
Causin, N. P., M. D.
Causten, James H.
Causten, James H., Jr., M. D.
Chapman, J. G.
Charles, Samuel
Chauncey, J. S., U. S. N.
Cheever, B. H.
Chew, R. S.
Clarke, Matthew St. Clair
Cochrane, John T.
Coffin, J. H. C., U. S. N.
Condict, H. F.
Cooper, G. C., U. S. N.
Cooper, S., U. S. A.
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PROCEEDINGS

OF THE

THE MEETING OF APRIL, 1844.

NOTICE.

The following pages embrace those portions of the proceedings of the National Institute which led to the meeting of April, 1844, together with such parts of the exercises of that meeting as it has been found proper to publish.

It was originally intended to publish the proceedings of the April meeting, in extenso; but it was discovered at an early period that this would be both inexpedient and impracticable. Some of the papers were not exactly adapted for publication. Some had already been made public, though not printed. Others had been printed. Several were withdrawn, whilst others were never submitted for publication by their authors; and a few would have required costly illustrations. For these and other reasons, the committee, of which Mr. Spencer was chairman, recommended to the Institute that a very small number of the papers should be selected to be printed. Another consideration of an imperative nature compelled the Institute to adopt this course, viz: the want of funds sufficient to enable it to publish the proceedings more at large. This is the chief reason why the whole work, (the third bulletin and the proceedings of April,) has been so condensed as to deprive it of much of that attractiveness and fulness which the copious and interesting materials on hand would have imparted to it.

PROCEEDINGS, &c.

FIRST CIRCULAR,

Respecting meetings of scientific and literary men in the United States.

WASHINGTON, *October* 15, 1842.

SIR: We have the honor to transmit herewith a copy of certain proceedings of the National Institute, [see third bulletin, page 332, et seq.] at meetings held in this city, in the months of June, August, and September last. We would invite your attention particularly to that portion of those proceedings which contemplates meetings of the scientific men of our country at the seat of the General Government, under the auspices of the Institute. It has appeared to us that in no other way could the intelligence, science, and practical observations of our countrymen in the different parts of the United States, be so easily collected as by the mode proposed. Many gentlemen of science will be drawn to this place by their business, and to others, the additional inducement of an opportunity to witness the deliberations of Congress, will increase the probability of a general attendance.

It is certainly desirable that assemblages for the purpose contemplated should be as general as possible, so as to combine the representation of science from every section of our land. We may not compete with the British Association, which has already achieved so much good, in the extent and depth of scientific researches; but it is believed that discoveries in nature and improvements in the arts are constantly made in the United States, which remain unknown or unappreciated for the want of some medium by which a knowledge of them can be more generally diffused.

The object of the present note is rather to obtain preliminary views and information in regard to the time and mode for convening the first meeting, and the probability of success in the effort. The last Monday in November next has been suggested as a convenient time for the first meeting. Will you have the goodness to communicate your views on these subjects to the chairman of the Committee, to whom the matter has been entrusted, as soon as may suit your convenience.

Very respectfully, your obedient servants,

J. C. SPENCER, *Chairman*,
WM. C. PRESTON,
LEWIS F. LINN,
JOSEPH R. INGERSOLL,
ABBOT LAWRENCE,
Committee.

The following persons are the existing officers of the Institute:

Honorable JOEL R. POINSETT, *President.*
PETER FORCE, *Vice President.*
W. J. STONE, *Treasurer.*
F. MARKOE, JR., *Corresponding Secretary.*
G. R. BARRY, *Recording Secretary.*

DIRECTORS ON THE PART OF THE GOVERNMENT.

Honorable DANIEL WEBSTER, *Secretary of State.*
" W. FORWARD, *Secretary of the Treasury.*
" J. C. SPENCER, *Secretary of War.*
" A. P. UPSHUR, *Secretary of the Navy.*
" CHAS. WICKLIFFE, *Postmaster General.*
" HUGH S. LEGARE, *Attorney General.*

DIRECTORS ON THE PART OF THE INSTITUTE.

Honorable W. C. PRESTON, *United States Senate.*
" LEVI WOODBURY, *United States Senate.*
Colonel JOHN J. ABERT, *Corps of Top. Engineers.*
" J. G. TOTTEN, *Corps of Engineers.*
A. O. DAYTON, Esq., *Fourth Auditor.*
Commodore L. WARRINGTON, *United States Navy.*

SECOND CIRCULAR.

WASHINGTON, *February* 24, 1843.

To the Friends and Correspondents of the National Institute and the Members of Scientific and Learned Societies of the United States, &c., &c., &c.

On the 15th October last a circular was addressed to the scientific and literary men of the United States, transmitting a copy of certain proceedings of the National Institute for the Promotion of Science, and inviting particular attention to that portion of the proceedings which contemplated the general meeting proposed by the Institute to be held at the seat of Government.

This circular was, at first, attempted to be sent directly to individuals, but it was soon found impracticable to address all who were entitled to special invitation. The members of the Institute, and those who had, in various ways, most liberally contributed to the promotion of its objects, were of course expected to attend; yet the difficulty of obtaining all the names and residences of others, eminent in the various branches of knowledge, rendered it necessary to resort to a more general mode of effecting the purpose. With this view, the circular was published in the papers of the District of Columbia, and was thus made general.

The object of the first circular was, not to fix on any particular time for the meeting, nor was it intended by the Institute or the committee, to make Washington the place of all subsequent meetings, if it should appear to be contrary to the judgment of those who had the right to decide upon such an important question. It was rather to obtain preliminary views of the friends of the Institute, and general information, as to the time and mode of convening; and, afterwards, to adopt a plan and a time, (which might be gathered from the replies of those whose opinions had been solicited,) to be the most convenient.

These replies have been numerous and interesting, and present, almost without exception, a decided approbation of the step that has been recommended, as well as of the course of the Institute, under the auspices of which that step has been begun. The committee, after having carefully considered these replies, have come to the conclusion that the month of April, 1844, is the period which will best suit the convenience of all.

The committee were aware that several previous attempts had been made to get up a similar meeting upon the plan of the British Association, and that those

attempts had proved fruitless. Perhaps too much was expected at a time when our learned men were unprepared for co-operation in such extended plans. But the idea had found favor, and it may be affirmed justly that we owe, in no small degree, to the system of State Geological Surveys, the present improved prospect of accomplishing a noble and long cherished object.

Under these circumstances, about three years ago, some of the gentlemen engaged in the New York Survey, (the fruits of which are already beginning to appear in published volumes, reflecting honor upon the liberality of the State, and credit upon the abilities of those who have been engaged in that great enterprise,) proposed to bring about the object by a different method; circulars were sent by them to geologists of other State surveys, and a meeting was held in Philadelphia, in 1840. This meeting was respectable, and resulted in the formation of the "Association of American Geologists." It adjourned and met again in Philadelphia in 1841. At the second meeting it was deemed expedient to adopt the foreign plan of changing the place of meeting. Boston was chosen as the place for the third meeting; at which its objects were extended, and the Association became the "Association of American Geologists and Naturalists." The fourth meeting is to be held in Albany, during the month of April, 1843.

The proceedings of this Association had been witnessed by the National Institute with feelings of deep interest; and, in 1841, a formal invitation was sent from the latter to the former, requesting them to make Washington the place of one of the annual meetings. The invitation was promptly accepted, and it has been decided that the fifth meeting of the "Association of American Geologists and Naturalists" is to be held in Washington in the month of April, 1844.

The disadvantages and inconvenience of two meetings, have, after mature reflection, appeared to the committee so obvious, that they have thought it best to fix the first Monday of April, 1844, as the period for the general meeting; and they take this occasion and mode of respectfully inviting to Washington, in the name of the National Institute, the members of the American Philosophical Society, the oldest scientific institution of our country, the members of the Association of American Geologists and Naturalists, and the members of all other scientific and learned societies in the United States; the honorary and corresponding members and patrons of the Institute, and all others engaged and concerned in the "increase and diffusion of knowledge among men."

The plan of operations will be left entirely to those who may be present on the occasion. The Institute and the committee, without attempting to control them in any manner, charge themselves with the duties of making every preparation in their power adapted to facilitate the scientific objects, the promotion of which such a body may be supposed to cherish.

JOHN C. SPENCER, *Chairman of Committee.*

THIRD CIRCULAR.

WASHINGTON, *March* 5, 1844.

To the Friends and Correspondents of the National Institute; the Presidents and Officers of Colleges and Universities; the Members of Scientific and Literary Societies of the United States, &c., &c., &c.

The subscribers take pleasure in announcing that arrangements are made for the first annual meeting of the National Institute. It will be held at Washington on the first Monday of April. In issuing this invitation, the committee are unwilling

to give to it a particular direction, or even to enumerate the associations, public bodies, or classes of individuals, that are embraced within its scope. The Institute is established at the seat of the General Government. It is chartered by the Legislature of the United States. Some of its officers derive their situation, as such, only from their official relations to the Government. It looks for essential and permanent support to the constituted authorities of the nation. Yet, thus connected with the Federal Government and emanating from its will, the society is in all respects the least exclusive that ever was formed. It embraces in its comprehensive plan, all who are, or who are disposed to be, the promoters of science, literature, or the arts. Every one, whatever may be his turn of mind, or course of occupation, may find in its objects something congenial to his tastes, or conducive to his pleasures, interests, or pursuits. Philosophy and practical mechanics are alike within its view. Arts of embellishment and strict utility will be cultivated. Productions of nature, genius, and labor, will be sought for, received, and interchanged. Inquiries and discoveries at home and abroad will be prosecuted with zeal. Theories of ancient and modern times will be investigated and tried. Secrets of the earth, the water, the air, and the heavens will be explored. In assuming for an association which is scarcely matured into existence these broad and lofty purposes, we must not be deemed extravagant or wild. An explanation will be found in the universality of the scheme and the connection with it of every variety of interest. Not an expedition can be fitted out under the auspices of the Government, by land or by water, but may be made auxiliary to it. Diplomatic agencies are directly and positively promotive of its plans. Consular employments, wherever extended and however diversified, will become contributory to them, almost without an effort. In our own country every public institution, possessing some objects in common with the Institute or collateral to it, may at once afford and derive assistance from the harmonious intercourse. Membership of the one will naturally imply membership of the other. Wherever light springs from human minds, its reflection will be immediate from this association; for it hopes to be identified with every source of light which human minds can shed throughout the globe.

Resting on the basis of a popular government, the Institute is designed literally for the people. It hopes to collect, and to distribute with unsparing hand whatever may be beneficial to man. It is obvious that there can be no limit to the number of its associates except that which may be imposed by individual reluctance to do good in this especial form. The door is open wide to the friends of the advancement of the power, knowledge, and happiness of mankind; for the ability to be useful extends throughout them all. Wherever a disposition can be found to contribute or derive useful information, the badge of membership may be worn.

It may be proper to repeat the intimations heretofore given, that the peculiar means of utility which this association will possess, will consist in its power to exchange objects of interest and value with all other societies. Enough has been said to show the extent and variety of correspondence which it may command. This correspondence, in its almost infinite subdivision, becomes a thousand channels through which will be conveyed the productions of every quarter of the world. Possessed of these, not for selfish purposes, neither for concealment nor mere display, they will become, to all useful ends, the common property of kindred associations, of which the Institute is but the most fortunate in procuring and the most happy in distributing the fruits of its position and peculiar care. It is more than probable that many specimens may be received of similar kinds. Such would at once be transferred where their uses, thus multiplied, would be the most esteemed. When pro-

ductions so rare as to admit no counterpart find a place in the halls of the Institute, those halls, and all they contain, will be the rightful resort of the curious; and the property of all will, in its central resting place, be easily accessible and beneficially available to all. The officers of the Institute will thus become custodiers for the friends of science throughout the world. These are no dreams of fancy. Stores of valuable productions have already been accumulated and are in daily progress. They wait only the means of arrangement and classification, to realize all of the bright hopes that have been indulged.

In calling together a large assembly of persons, we are not insensible to the somewhat peculiar character of the invitation. It promises to our guests only an intellectual banquet, and it looks to them for the production of the food. We have further calls to make upon their indulgence. In former circulars it has been stated that appeals are to be made to public liberality. This is the occasion when an appeal must be made. Wherever success has attended even public enterprises of this nature, it has been the result, in a great degree, of private munificence. The names of liberal donors have gone down to posterity with some of the noblest monuments of national pride. If they who shall honor the meeting with their presence, could bring along with them pledges of good will from their fellow citizens and friends, offerings such as these would give interest and zest to future exhibitions, in the success of which every liberal donor would have a share. They will be welcome, and well applied, from the profuse outpourings of generous affluence, to the humble tribute of the widow's mite.

The Institute is of the broadest popular character. Its permanence, and its freedom from the usual dangers which beset almost all newly-formed popular establishments, are relied on, mainly because of its connection with the Government. The property which it receives, is the property of the nation. It is subject to no individual neglect, or caprice, or personal or corporate liability. Every object which, in permanent ownership or temporary deposite, may be placed in the care of the Institute, is to be regarded as the absolute or qualified property of the Government. It is held, indeed, for the purposes of the Institute, and through its administration; but it acts only as the agent and organ of the Government. Officers of the association are thus representatives of the nation. As such they will hold the stores, manage the concerns, receive the contributions, exchange the articles, and diffuse with sedulous care the benefits of the association. They are trustees of a greater corporation, which has necessarily invested certain corporate powers for limited purposes in them. Not partaking of any political elements of power, they will indirectly aid in some of the best political purposes—the advancement of general knowledge, and the elevation of the national character. Like the keepers of a congressional library, the managers, on a larger scale, and with chartered authority, are trusted with the important office of taking care of the objects which may come into their hands. In the effectual care of them, the field of usefulness is boundless. They will not be buried talents. Sources of various knowledge, they will be restored in streams of instruction throughout the country and the world. Observation and experience may from time to time unfold the true means of diffusing it, and they will be resorted to with alacrity and zeal. Masses of elementary information will be received. The methods are numerous by which they may be made subservient to the purposes of men. Different ages and countries have preferred different systems of communicating knowledge, and the wisest have endeavored by turns to employ them all. Popular lectures and disciplined schools, practical and familiar illustrations, didactic discourse, the text book, the disserta-

tion, the essay, the profound folio, and the tempting magazine, all have found advocates, and each has probably been productive of useful results. One of the ends of the contemplated meeting may be to suggest the most expedient and appropriate course for the diffusion of knowledge by the National Institute, besides that which, above all, it will claim as peculiar to itself in extent and variety—the system of liberal, active, and unintermitted exchange.

It is earnestly hoped that the various colleges and universities throughout the country, may be represented at the coming meeting in strength of numbers which will ensure a proportioned degree of intellectual vigor and accomplishment. Philosophy, represented by that venerable society of which Franklin was a founder, and Jefferson a president, will appear; associations of geologists and naturalists, and historical societies, will furnish their respective quotas of intelligence; individual teachers and professors, whose peculiar opportunities have enabled them to unfold the mysteries of nature and of art; artists, and liberal minded men, whose employment it has been rather to study than teach—all will find congenial spirits who will naturally seek and be sought for, by each other.

The committee have not sent this circular abroad, before they have ascertained that the exercises of the meeting will be full of interest. Different parts of the country have promised to contribute papers of value. Individual intercourse will be opened between many who have been heretofore strangers, or known to each other only through the reports of fame. Personal observation will show how deep and universal has been the feeling towards the Institute, and with how lavish a hand it has been displayed; and yet how palpable are the deficiencies of arrangement and reciprocal return.

The committee scarcely know whether it would be in place to regret that the Institute is yet without any appropriate Hall for the reception of its numerous guests. It will receive them with honor and respect, in such expedient apartments as it has been able to procure. Should the meeting prove as successful as the hopes of the managers in relation to it are ardent, they will expect, hereafter, to welcome all who may visit the Association, in apartments peculiar to itself, stored with the objects of its honest pride, (marks of universal confidence at home and abroad,) and worthy of the distinguished visiters, whom they thus, now and at all times, respectfully and cordially invite.

JOSEPH R. INGERSOLL,
In behalf of the committee.

Committee :

Hon. JOHN C. SPENCER, *Secretary of the Treasury*, Chairman.
" JOSEPH R. INGERSOLL, *House of Representatives.*
" ROBERT J. WALKER, *U. S. Senate.*
" WM. C. RIVES, *do.*
" RUFUS CHOATE, *do.*
" WM. C. PRESTON, *South Carolina.*
" ABBOT LAWRENCE, *Boston.*
ALEXANDER DALLAS BACHE, *Superintendent of the Coast Survey.*

The several circulars issued by the Institute in reference to the April meeting occasioned a very large correspondence, embracing, besides direct replies, extensive and varied views respecting the interesting objects of the April meeting and of the National Institute.

An abstract of this correspondence would fill a volume, and it is, therefore, proposed in this place to refer to it in the following most general manner, confining even this bare notice to that portion of the voluminous correspondence which immediately preceded and followed the meeting.

Between February and August, 1844, independently of a variety of communications which have been reported upon elsewhere, letters on the subject were received:

From Professor Robert M. Patterson, Philadelphia, February 2, 1844.
From the same, February 19, 1844.
From Hon. W. C. Rives, U. S. Senate, February 5, 1844.
From Hon. Albert Gallatin, New York, February 6, 1844.
From Hon. Richard Rush, Philadelphia, February 6, 1844.
From Lieut. M. F. Maury, U. S. Navy, Washington, February 6, 1844.
From Rev. H. Humphreys, President St. John's College, Annapolis, Feb. 6, 1844.
From the same, February 9, 1844.
From Professor W. R. Johnson, Philadelphia, February 6, 1844.
From Professor J. W. Bailey, West Point Military Academy, February 8, 1844.
From Professor George Tucker, University of Virginia, February 8, 1844.
From Rev. F. Wayland, President of Brown University, Providence, Rhode Island, February 8, 1844.
From A. D. Chaloner, M. D., Philadelphia, February 8, 1844.
From the same, February 12, 1844.
From William Maxwell, President of Hampden Sidney College, February 9, 1844.
From Professor Francis Lieber, Columbia, S. C., February 9, 1844.
From Professor E. Foreman, Baltimore, February 10, 1844.
From Rev. Professor J. G. Morris, Baltimore, February 10, 1844.
From Professor Benjamin Hallowell, Washington, February 10, 1844.
From W. B. Hodgson, Savannah, February 10, 1844.
From the same, February 13, 1844.
From Professor Beverly Tucker, Virginia, February 12, 1844.
From Professor T. R. Dew, William and Mary College, February 12, 1844.
From Professor J. P. Durbin, Dickinson College, February 12, 1844.
From Professor John Locke, Cincinnati, February 12, 1844.
From Professor T. R. Beck, Albany, February 13, 1844.
From Samuel L. Dana, Lowell, February 13, 1844.
From Hon. Theodore Frelinghuysen, February 13, 1844.
From Georgia Historical Society, Savannah, sending delegates to the Meeting, February 13, 1844.
From Professor George Upfold, Pittsburg, February 13, 1844.
From Professor Daniel Drake, Louisville, February 14, 1844.
From Professor Samuel G. Morton, Philadelphia, February 14, 1844.
From Rev. Josiah Quincy, President of Harvard University, February 14, 1844.
From Professor James Renwick, New York, February 15, 1844.
From Rev. Dr. E. Nott, President of Union College, Schenectady, February 15, 1844.
From Professor Robert Hare, Philadelphia, February 15, 1844.
From Professor W. H. C. Bartlett, West Point Military Academy, February 16, 1844.

From George R. Gliddon, Philadelphia, February 16, 1844.
From Professor J. W. Draper, New York, February 17, 1844.
From Thomas Sewall, M. D., Washington, February 17, 1844.
From Professor E. Loomis, Western Reserve College, Ohio, February 18, 1844.
From Professor A. Potter, Schenectady, February 19, 1844.
From Rev. P. Lindsley, President College, Nashville, February, 20, 1844.
From Dr. S. A. Cartwright, Natchez, February 20, 1844.
From Professor W. A. Norton, Delaware, February 20, 1844.
From A. Browne, Wareham, February 21, 1844.
From John S. Skinner, Washington, February 21, 1844.
From Professor A. Caswell, Providence, February 21, 1844.
From Dr. William Darlington, West Chester, February 22, 1844.
From Rev. James Ryder, President Georgetown College, February 22, 1844.
From Professor M. G. Williams, Cincinnati, February 22, 1844.
From Georgia Historical Society, February 23, 1844.
From Wm. H. Prescott, Boston, February 26, 1844.
From Professor B. Tucker, Virginia, February 26, 1844.
From William B. Lawrence, New York, February 26, 1844.
From Professor M. Jacobs, Gettysburg, February 26, 1844.
From Professor James Hamilton, Nashville, February 27, 1844.
From Professor G. W. Duffield, Detroit, February 27, 1844.
From Jared Sparks, Boston, February 27, 1844.
From Lieut. J. M. Gilliss, U. S. Navy, February 28, 1844.
From Rev. B. Hale, President Geneva College, February 28, 1844.
From Professor C. M. F. Deems, North Carolina, February 29, 1844.
From Professor H. St. George Tucker, Virginia, March 1, 1844.
From Professor E. Loomis, Ohio, March 1, 1844.
From Rev. John O. Choules, Boston, March 1, 1842.
From Professor G. W. Keeley, Waterville College, Maine, March 2, 1844.
From Professor Benjamin Pierce, Cambridge, March 3, 1844.
From C. Gill, Flushing, New York, March 4, 1844.
From Professor S. S. Haldeman, Pennsylvania, March 4, 1844.
From the same, March 11, 1844.
From General James Talmadge, New York, March 9, 1844.
From Professor W. W. Mather, Ohio, February 9, 1844.
From Dr. Thomas P. Jones, Washington, February 11, 1844.
From John L. Stephens, New York, March 13, 1844.
From G. S. Bedford, M. D., New York, March 16, 1844.
From Dr. W. Atlee, Pennsylvania, March 16, 1844.
From Major J. Le Compte, New York, March 16, 1844.
From Professor H. Tutwiler, Alabama, March 18, 1844.
From Dr. William H. Van Buren, U. S. Army, Washington, March 19, 1844.
From Judge William Harper, Virginia, March 19, 1844.
From Rev. J. M. Matthews, New York, March 20, 1844.
From Professor A. Caswell, Providence, March 20, 1844.
From Professor J. F. Frazer, Philadelphia, March 20, 1844.
From Ellwood Morris, Philadelphia, March 20, 1844.
From John S. Skinner, Washington, March 21, 1844.
From Dr. G. Engelman, St. Louis, March 21, 1844.
From Professor J. Hamilton, Nashville, March 21, 1844.

From Professor J. W. Dunbar, Baltimore, March 22, 1841.
From Lyceum of Natural History, New York, March 25, 1844, sending a delegate.
From John Pickering, Boston, March 26, 1844.
From George Bancroft, Boston, March 26, 1844.
From A. D. Bache, L. L. D., Washington, March 26, 1844.
From Professor W. Smyth, Bowdoin College, March 27, 1844.
From the Antiquarian Society, Boston, March 27, 1844, sending delegates.
From Rev. F. Wayland, President Brown University, March 28, 1844.
From T. L. Smith, Washington, March 28, 1844.
From John Johnson, Wesleyan University, Connecticut, March 29, 1844.
From Maryland Historical Society, March 30, 1844, sending delegates.
From New York Historical Society, March 31, 1844, sending delegates.
From Massachussetts Historical Society, March 31, 1844, sending delegates.
From Columbian College, April 1, 1844, sending a delegate.
From Dr. E. Foreman, Baltimore, April 1, 1844.
From Dr. W. H. Van Buren, U. S. Army, April 2, 1844.
From Connecticut Historical Society, April 2, 1844, sending delegates.
From New York Historical Society, April 3, 1844.
From Professor John G. Morris, D. D., Baltimore, April 6, 1844.
From Professor W. A. Norton, Delaware, May 27, 1844.
From W. B. Hodgson, July 2, 1844.
From Professor W. R. Johnson, Philadelphia, July 11, 1844.
From A. D. Chaloner, M. D., Philadelphia, July 18, 1844.
From Hon. A. H. Everett, Massachussetts, July 23, 1844.
From Professor M. Jacobs, Pennsylvania, July 29, 1844.
From Professor Benjamin Hallowell, July 30, 1844.
From Hon. John C. Spencer, July 26, 1844.
From F. J. Grund, Philadelphia, August 7, 1844.
From Professor M. Jacobs, Pennsylvania, August 13, 1844.

A general Committee of Arrangements was added to the former committee. It was divided into sub-committees of Reception, of Discourses, of Finance, of Publication, of Order and Proceeding, and of Correspondence, as follows:

1. Of Reception—*Having particular charge of the Hall at the Treasury building, and to pay suitable attention to the invited members:*

W. W. Seaton,	Capt. G. W. Hughes,	Dr. John M. Thomas,
Robert Lawrence,	Dr. Marcus C. Buck,	Benjamin Ogle Tayloe,
Dr. Thomas P. Jones,	John P. Van Ness,	W. T. Carroll.
Lieut. M. F. Maury,		

2. Of Discourses—*Having particular charge of the church and of the arrangement of exercises:*

Samuel Harrison Smith,	Dr. Magruder,	Henry L. Ellsworth,
McClintock Young,	John Carroll Brent,	Dr. Thomas Sewall,
Josiah F. Polk,	Rev. O. B. Brown,	Robert S. Chew.

3. Of Finance—*Having charge of the receipt of such funds and other contributions as may be forwarded or procured in Washington, for the purposes of the meeting and for the publication of the proceedings, papers, &c.:*

W. W. Corcoran,	George W. Riggs, Jr.,	Charles Hill,
John D. Barclay,	Dr. William Gunton,	John T. Sullivan,
F. H. Davidge,	Dr. McClery,	Dr. Wynne.

4. Of Publication—*Both during the continuance of the meeting and after it shall be closed:*

Peter Force,	Lieut. J. T. McLaughlin,	George Watterston,
Dr. J. H. Causten, Jr.,	H. K. Randall,	Walter Lenox,
Silas H. Hill,	B. B. French,	John D. Wilson.

5. Of Order and Proceeding generally—*Regulating the particular times of assembling and departure, procession from the Treasury, &c.:*

Alexander Hunter,	Lieut. P. Kearney,	M. St. Clair Clarke,
Lieut. W. H. Emory,	John W. Maury,	William A. Bradley,
Roger C. Weightman,	Major Wm. Turnbull,	John C. Harkness.
Capt. John S. Chauncey,		

6. Of Correspondence—*Who will carry into effect all arrangements, either during the period of the meeting or afterwards, that may be necessary to facilitate the receipt and correct annunciation and preservation of the exercises which shall have been performed, and information that may be received:*

Rev. Wm. Matthews,	W. Q. Force,	Rev. R. R. Gurley,
Bayard Smith,	Richard S. Coxe,	Lieut. George Totten,
John K. Townsend,	J. C. McGuire,	Francis Markoe, Jr.

Among these were distributed the duties which appropriately belonged to them. Every effort also was made to provide for the reception of those who had been invited.

The library hall of the Treasury Department was thrown open by the Hon. John C. Spencer, for the use of the Institute during the Convention, and the use of the large Presbyterian Church in 4½ street, and of the Unitarian Church, was granted for the purpose of the sessions. The hall of the library contained a variety of objects of interest, and was used during the whole period as a place of reunion and of rendezvous. The press announced from day to day the order of proceedings.

On the first of April the members and guests assembled, in conformity with public notices, at 10 o'clock, and, accompanied by a band of music, moved in procession to the Church.

ORDER OF EXERCISES.

Exercises of First Meeting, Monday Morning, April 1.

The President of the United States presided.

Prayer, by the Rev. C. M. Butler.

Opening Address.—*By John Tyler, President of the United States, and Patron of the Institute.*

Introductory Discourse.—*By the Hon. Robert J. Walker, of the U. S. Senate.*

On the Physical Constitution of the Rays of the Sun.—*Professor J. W. Draper, of New York.*

On the Great Comet of 1843.—*Professor Elias Loomis, of Ohio.*

Exercises of the Second Meeting, Tuesday, April 2.

Hon. Levi Woodbury in the chair.

Prayer, by the Rev. Mr. Sprole.

On the Economy of Science in relation to the Government.—*Rev. H. Humphreys, D. D., President of St. John's College, Annapolis.*

On the Liberation of Caloric in some Chemical Changes that are attended with an Enlargement of Bulk.—*Professor Benjamin Hallowell, of Maryland.*

On the Gulf Stream.—*Lieut. M. F. Maury, U. S. Navy.*

On the Dangers most to be guarded against in the Future Progress of the United States.—*George Tucker, Professor of Moral Philosophy, University of Virginia.*

Exercises of the Third Meeting, Wednesday Morning, April 3.

Rev. Dr. Humphreys in the chair.

Prayer, by Dr. Humphreys.

On the Past and Present State of Entomological Science in the United States.—*Rev. John G. Morris, D. D., Baltimore.*

On the Attraction of a Planet upon a Material Point in Space.—*Professor Richard S. McCulloh, Baltimore.*

On the Megatherioid Fossils of the Atlantic Coast of Georgia.—*William B. Hodgson, of Savannah, Georgia.*

On Domestic Exchanges in Natural History and Geology.—*Professor E. Foreman, of Baltimore.* (*Read by Dr. Morris.*)

Notice of a Ballistic Pendulum constructed at Washington Arsenal, for Experiments in Gunnery.—*Capt. A. Mordecai, U. S. Army.*

Exercises of the Fourth Meeting, Wednesday Evening, April 3.

Hon. JOHN C. SPENCER in the chair.

On the Condition of Science in the United States and Europe.—*A. D. Bache, L. L. D., Superintendent of the United States Coast Survey.*

On the Indian Summer.—*Professor M. Jacobs, of Pennsylvania.*

Petrified Forest near Cairo, Egypt, discovered by Mons. Linant.—*A. D. Chaloner, M. D., of Philadelphia.*

Exercises of the Fifth Meeting, Thursday Morning, April 4.

Hon. ROBERT J. WALKER in the chair.

Prayer, by the Rev. Dr. LAURIE.

On an Improved Method of Teaching the Natural Sciences.—*Peter A. Browne, L. L. D., of Philadelphia.*

On the Physical Geology of the United States.—*Professor W. W. Mather, of Ohio.*

On the Improvement of Mathematical Science and the Consequent Advancement of the Natural Sciences.—*Professor C. Gill, of New York.*

Exercises of the Sixth Meeting, Thursday Evening, April 4.

Hon. JOHN C. SPENCER in the chair.

On the Origin, Duration, and End of the World.—*Rev. E. Nott, D. D., L. L. D., President of Union College.*

On the Glacier System, or Ice-period of Agassiz.—*Professor J. H. Agnew, of New York.*

Exercises of the Seventh Meeting, Friday Morning, April 5.

Hon. BENJAMIN F. BUTLER, of New York, in the chair.

Prayer, by the Rev. Dr. BACON.

On Lake Superior, embracing an Account of Miscellaneous Observations on the Geology, Mineralogy, Topography, Scenery, Climate, Meteorology, &c., &c., of the Lake.—*Professor J. Locke, of Cincinnati.*

On the Nebular Hypothesis.—*Professor W. A. Norton, of Delaware.*

On the Measurement of Base Lines.—*Capt. W. A. Swift, U. S. Army.*

On the Design of the Medical Department of the National Institute.—*Thomas Sewall, M. D., Washington.*

On the evening of Friday, the guests and members assembled at the library hall of the Treasury Department, from whence they proceeded in a body to pay their respects to the President of the United States.

Exercises of the Eighth Meeting, Saturday Morning, April 6.

(*Held at the Unitarian Church, near the City Hall.*)

Hon. JOSEPH R. INGERSOLL in the chair.

Prayer by the Rev. SEPTIMUS TUSTON, Chaplain U. S. Senate.

On the Modern Historical Schools of France and Germany, and the Philosophy of History.—*F. J. Grund, of Philadelphia.*

Notes on American Polythalamia.—*Professor J. W. Bailey, of the Military Academy, West Point.* (*Read by A. D. Bache.*)

On the Scientific Character and Researches of the late James Smithson.—*Professor Walter R. Johnson, of Philadelphia.*

On the Effects of Large Doses of Sulphate of Quinine on the Human System, as a Remedial Agent.—*Dr. W. H. Van Buren, U. S. Army.*

Description of a Meridian Circle for the Observatory of Georgetown College, D. C.—*Rev. Professor James Curley, of the College.* (*Read by A. D. Bache.*)

On the Importance of Physiology as a Branch of General Education. —*Professor J. R. W. Dunbar, of Maryland.*

Exercises of the Ninth Meeting, Monday Morning, April 8.

Hon. JOHN Q. ADAMS in the chair.

Prayer, by the Rev. Mr. BULFINCH.

The Corresponding Secretary announced the Societies and Colleges which had sent delegates to the meeting, and read a communication from the Hon. Levi Woodbury. He also read extracts of letters from the Rev. Dr. Wayland, President of Brown University, Rhode Island; from Dr. Foreman, of Baltimore; from Professor Johnson, of the Wesleyan University, Connecticut; and from Professor Tutwiler, of Alabama—offering important suggestions to the National Institute. He also read a communication from George E. Chase, U. S. Army, of Pensacola, suggesting a method of settling the orthography and orthoephy of the English language;—a paper from George Baker and I. Thurber, of Providence, containing a series of observations on the tides in Providence River and Narragansett Bay, in 1812, communicated in the name of the Providence Franklin Society; —a paper from S. S. Haldeman, Professor of Zoology, Philadelphia, "On the necessity of a National Institution for the Encouragement of Science;"—a paper by Francis Leiber, L. L. D., of South Carolina, containing "Remarks on Public Executions;"—a paper from Professor J. Hamilton, of the University of Nashville, "On certain Meteorological Facts observed at Nashville;"—a communication from J. C. Pickett, U. S. Chargé d'Affaires at Lima, Peru, giving an account of some remarkable ruins in the province of Chachapoyas, Peru;—and, a paper "On the Smithsonian Bequest," by the Hon. Richard Rush, of Pennsylvania.

On Meteorology.—*Professor J. P. Espy, of Washington.*

A Call for Observations on the Late Storm.—*Professor Robert Hare, of the University of Pennsylvania.* (*Read by A. D. Bache.*)

In Support of the Theory of One Electric Fluid, by an Explanation of the Phenomena of the Repulsion of Pith Balls negatively electrified, &c.—*John Tyler, Jr., Washington.*

An Abstract of Magnetical and Meteorological Observations made under the direction of the War Department, at the observatory of Girard College, Philadelphia.—*A. D. Bache, L. L. D.*

Exercises of the Tenth Meeting, Monday Evening, April 8.

Hon. JOHN C. SPENCER in the chair.

On the Moral Tendency of the Science and Learning of the Past and Present Centuries.—*Hon. A. H. Everett, of Massachussetts.*

On a Method of Determining the Centre of Population of a Country, with its Application to the United States at each Census.—*Professor R. M. Patterson, of Philadelphia.*

Closing Address.—*Hon. John C. Spencer.**

LIST,

Embracing the papers, &c., selected from those enumerated in the foregoing exercises, for publication.

1. Prayer, by the Rev. Mr. Butler.
2. Opening Address, by John Tyler, President of the United States, and Patron of the National Institute.
3. Introductory Discourse by the Hon. Robert J. Walker, of the U. S. Senate, one of the Directors of the Institute.
4. Letter, from the Hon. Levi Woodbury, U. S. Senate.
5. Address of the Hon. John Quincy Adams to the Ninth Meeting, at which he presided.
6. Paper on the Smithsonian Bequest, from the Hon. Richard Rush.
7. Closing Address, by the Hon. John C. Spencer.

To which are added—

Memorial to Congress, of the National Institute.

Memorial to Congress, of the Friends of Science.

Charter of Incorporation.

Constitution and By-laws.

List of officers, and honorary, corresponding, paying corresponding, and resident members; and also of Societies, foreign and home, in correspondence with the Institute.

*The National Intelligencer contained from day to day ampler notices of these proceedings, and critiques and extracts from many of the papers.

PRAYER

AT

OPENING OF THE APRIL MEETING OF NATIONAL INSTITUTE, APRIL 1, 1844.

BY THE REV. CLEMENT M. BUTLER, OF GEORGETOWN, D. C.

Almighty and everlasting God, our Creator, Redeemer, Preserver, continual and bountiful Benefactor, we would approach thy footstool, with an awful sense of thy majesty and glory, and with a contrite and humble confession of our sinfulness and of our dependence upon thee. Though thou art exalted above all praise; though thou inhabitest eternity; though thou art glorious in holiness and of purer eyes than to behold iniquity; yet, in thine infinite compassion, thou hast permitted and encouraged us to draw nigh unto thee in prayer, and, through Christ our Redeemer, to have access to thee with filial confidence through the faith of Him. Through Him we come to thee, acknowledging our dependence, confessing our manifold transgressions of thy righteous laws, appealing to thee for forgiveness, adoring thee for thy greatness, blessing and magnifying thy glorious name for thy unspeakable goodness to the children of men.

We beseech thee, Almighty God, to let thy blessing rest upon the Institution whose members are here and now assembled. Grant that the purpose for which it was established may be accomplished; and that it may be made to promote the welfare of man and the glory of thy great name. We would lay its foundations in prayer, that its superstructure may rise in praise to thee. We would acknowledge thee as the Father of our spirits. In the search for truth, we would look up to and depend on thee as the essential truth—as the light and life of the souls of all thy creatures. We confess in humility that, because of sin, our minds are short-sighted, erring, and benighted. Left to ourselves in search of truth, we grope in the noonday as in the night; we look for light, but behold obscurity; for brightness, but behold darkness. It is only as the illuminating ray of thy divine intelligence lights up our dark spirits that we can see aright. Thou art light, and in thee is no darkness at all. In thy light let us see light. Illumine what in us is dark, and remove whatever in us obstructs the reception and the love of truth, that we may see the realities of things in nature, in providence, and in redemption. And, oh Father of Lights, as in the proceedings of this Institution the manifold marvels of science and of nature are made to pass before our minds, enable us to rise from the contemplation of what thou doest and enablest man to do, to what thou art; that we may not only exclaim in wonder "How manifold are thy works!" but may add, "in wisdom," in goodness and mercy, "hast thou made them all." Let not the minds of any of us rest in the so enamoured contemplation of the wonder and beauties which are manifest in thy works, as to be unable to soar to the perception and enjoyment of the higher loveliness that is in thyself. Oh, let not Philosophy, with her eye and heart fixed upon the earth, prone and grovelling, worship and serve the creature more than the Creator; but baptize her in the pure fountain of eternal

truth, that she may have a purged eye to see, and a purified heart to love, the treasures of wisdom and of knowledge that are hid in thee. And while we adore thee for thy perfections, lead us also from the knowledge of what thou art, to the knowledge of what thou doest therefore require of us thy sinful and dependent creatures. May we thus learn to seek thy favor, to study thy will, to observe thy laws, and in all our actions to aim at thy glory, the good of our own souls, and the souls of our fellow men. Then shall thy works praise thee, oh Lord, and thy saints give thanks unto thee. Then shall they unitedly speak of the glory of thy kingdom, and talk of thy power.

Grant, also, we beseech thee, heavenly Father, that this Institution may be a blessing not only to the individual members who compose it, but to our country and the world. May it be made greatly instrumental in extending among us the beneficent triumph of literature, science, and the arts; of binding fraternal bonds around the various portions of our widely extended land; of promoting the civil and social advancement and happiness of society; of spreading abroad the influence of civilization and christianity; of extending the reign of peace and good will throughout the whole family of man. Look in special mercy upon the officers and members of this society, and all who take part in its deliberations. Bless the President of these United States, and all who are associated with him in authority, and so replenish them with the grace of thy Holy Spirit that they may always incline to thy will and walk in thy way. Endow them plenteously with heavenly gifts; grant them in health and prosperity long to live, and after this life to attain everlasting joy and felicity. Bless the people of these United States, and especially their senate and representatives, in Congress assembled. Be pleased so to direct and prosper all their consultations, that peace and happiness, truth and justice, religion and piety, may be established among us for all generations. And oh, heavenly Father, grant that the absence on this occasion of some of the most prominent officers and promoters of this Institution, who looked forward with interest and with hope to this day's assembling, and who are now sleeping in their silent sepulchres, may not in vain admonish us so to number our days that we may apply our hearts unto wisdom. Watch over and preserve all the members of this Institution during its session here; protect those who have come from abroad, and the families they have left, from danger and from every evil, and when their work shall have been accomplished, restore them to their homes, thankful for thy mercies and devoted to thy service. Keep us all, we beseech thee, outwardly in our bodies, and inwardly in our souls. When the days of our probation shall have ended, may we depart hence at peace with thee; and when the Lord Christ shall come in his glorious majesty to judge both the quick and the dead, may we rise to the life immortal through the same Jesus Christ, who liveth and reigneth with the Father and the Holy Ghost, ever one God, world without end. Amen.

OPENING ADDRESS,

BY

JOHN TYLER,

PRESIDENT OF THE UNITED STATES, AND PATRON OF THE NATIONAL INSTITUTE.

GENTLEMEN: I have felt myself highly flattered in having been called upon to preside over this, the first general meeting of scientific men from all parts of the Union which has ever been held at the seat of Government; and I hail this assemblage, as opening a bright and auspicious vista, through which we can discover the future coming up, to this same place, to lay upon the altar of science, its rich contributions. Under the auspices of the National Institute, a brotherhood of men of science is established, which constitutes them as one family, worshipping in the same temple, and making their offerings at the same altar. The poet may bring hither his wreath, made up of the bright creations of his fancy—the child of music, his lute—the mathematician, his theorem—the philosoper, his speculation—the mechanic, his latest invention—the navigator, the productions of distant and unknown lands—the honest farmer, his system of agriculture—the manufacturer, his beautiful fabrics—the astronomer, the navigator of the skies, his observations on the heavenly bodies—and the patriotic statesman, his generous views, as to the present and future fate of nations. What a noble monument may thus be raised to science; and how eagerly will those who are to come after us, read upon its pure surface the names of those who have contributed to erect it.

This auspicious commencement has arisen from the exertions of a few individuals, in the first instance, who conceived the plan of a National Institute, where all contributions to art and science, might be collected and suitably arranged. It seemed only necessary for them to develop fully their plan, in order to secure for it the public favor. The concentration of means is quite as necessary in matters of the arts and sciences, as in the world of capital and labor. It would be vain for a single, unaided individual, by his mental and physical exertions, or his own private means, to erect a rival monument to those which tower aloft, and mark to generations, as they succeed each other, the flight of time. It is only by a union of means and the concentration of the strength of numbers that this can be done. So in the world of science. The light of all the stars serves not to dispel the darkness. It is only upon the rising of the glorious sun, that the shades of night are thoroughly dispelled, and a cloudless flood of light breaks in upon the universe. The brightest emanation of intellect may have its birth in the wilderness, and be unseen. The sweetest strain of the lyre may vibrate through the humble vale, and be unheard amid the strifes of man. Philosophy may conceive, and art may invent; but the conceptions of the one, and the inventions of the other, may wholly be unknown, for the want of a means to convey the knowledge of their existence to mankind. Hence, the great importance of philosophical and scientific associations, whose

chief end it is to collect, arrange, and disseminate the productions of mind and art. The want of such an association in the United States for the whole Union became manifest, and out of that conviction has arisen the National Institute. Congress, impressed with its importance, has given it a corporate existence; and the attention of the world, as is proven by the voluntary contributions which distant countries have already made to its collections, has been turned to it. That it has interested in its behalf the men of science of the United States, actively and zealously, this assemblage fully demonstrates. The Government itself, I doubt not, so far as it is authorized by the instrument of its own creation, will continue to it a fostering care. Where can it find a safer depository for the fruits of its expeditions, fitted out to explore distant and unknown regions, than the National Institute? What can it better do for the "increase and diffusion of knowledge among men," than by patronizing and sustaining this magnificent undertaking?

But I must here cease. When I rose, it was simply my intention to have returned you my thanks for the honor of having been requested to preside over your deliberations to day; and I will no longer detain you from the banquet which awaits you. I now present to you the Hon. Mr. Walker, of Mississippi, who will deliver the introductory address.

INTRODUCTORY ADDRESS

OF

HON. R. J. WALKER, OF MISSISSIPPI,

DIRECTOR OF THE NATIONAL INSTITUTE.

This is the first general meeting of the friends of science ever convened in Washington. It is assembled at the capital of the Union, upon the call of the National Institute. This Institute is located at the home of the Federal Government, and its operations are designed to embrace the whole Union. Rising above local and sectional influences, it appeals to the friends of science throughout the nation, and asks the support of all, with a view to the general diffusion of knowledge, and advancement of American science. It is not designed to impede the progress or impair the usefulness of any present or future scientific institutions or societies in any of the States, but would desire to establish between them and this Institute the most cordial relations, together with reciprocal aid and encouragement. Experience has proved that no one institution, however distinguished, of any State, can bring to its aid the combined efforts and support of the whole Union. Each State will desire the advancement of its own institutions; and here only can all meet beyond the limits of all the States, and unite, as Americans, in erecting and maintaining an institution which shall be truly national, not only in its location, but in all its operations. Whilst the hopes of this Institute are most elevated for the future, its present pretensions are truly humble. It does not claim to have established the character or assumed the position of a scientific institution; it does not pretend to teach the men of science of the nation, but seeks instruction from them, and appeals to them, for light, and aid, and encouragement. It asks them to come forward in a patriotic spirit, and make this Institute worthy of the great nation at the seat of whose Government it is placed, and where only the now scattered lights of American science can converge at a common centre, and radiate thence throughout the circle of the whole Union.

The power and glory of a nation greatly depend upon its advance in science; and whilst upon its imperishable records should be preserved the deeds of its warriors and statesmen, upon the same record should be inscribed the names of the untiring votaries of science, whose conflict has been with the elements of nature, and who have subjected them to the wants and comforts of man. Nearly all that we know of the world which we inhabit, of its magnitude, form, and motion, and of the elements of which it is composed, is the result of scientific research and discovery. The results of science are around and about us, enlarging our knowledge, elevating our views, and increasing our pleasures and our comforts. Nor have these researches been confined to the world which we inhabit, but have carried us myriads of millions of miles through universal space, marking the orbits of our own and other planets, and of the sun, the moon, and wandering comet. Science has taken as a base line the diameter of the earth's orbit, and with it spans immensity, and triangulates the shadowy verges of receding space. All who have contributed to these great results, of whatever age or clime, deserve our gratitude;

but to repeat the names of this scientific host, would fill a volume. Confining the inquiry to our own country would still transcend the limits of an address. Omitting, then, the whole range of hyperphysical knowledge, I shall confine my inquiries to the various improvements and discoveries made by our countrymen in the inductive sciences. It is said we have not contributed, in this respect, our share to the mighty mass of accumulated knowledge of the world. But it could not be expected that a nation whose existence as such is less than a century could, in that brief period, have equalled the discoveries of thousands of years. Without boasting, however, of our achievements, an impartial examination will show that our countrymen have greatly contributed to the modern improvements and discoveries in the various departments of the inductive sciences.

And, first, of electricity. This has been cultivated with the greatest success in our country, from the time when Franklin with his kite drew down electricity from the thunder cloud, to that when Henry showed the electrical currents produced by the distant lightning discharge. In Franklin's day the idea prevailed that there were two kinds of electricity, one produced by rubbing vitreous substances, the other by the friction of resinous bodies. Franklin's theory of one electric fluid in all bodies, disturbed in its equilibrium by friction, and thus accumulating in one and deserting the other, maintains its ground, still capable of explaining the facts elicited in the progress of modern discovery. Franklin believed that electricity and lightning were the same, and proceeded to the proof. He made the perilous experiment, by exploring the air with a kite, and drawing down from the thunder cloud the lightning's discharge upon his own person. The bold philosopher received unharmed the shock of the electric fluid, more fortunate than others who have fallen victims to less daring experiments. The world was delighted with the discoveries of the great American, and for a time electricity was called Franklinism on the continent of Europe; but Franklin was born here, and the name was not adopted in England. While Franklin made experiments, Kinnersley exhibited and illustrated them, and also rediscovered the seemingly opposite electricities of glass and resin. Franklin's lightning rod is gradually surmounting the many difficulties with which it contended, as experience attests the greater safety of houses protected by the rod, properly mounted, whilst the British attempt to substitute balls for points has failed. This question, as to powder magazines, has lately excited much controversy. Should a rod be attached to the magazine, or should it be placed upon a post at some distance? This question has been solved by Henry. When an electrical discharge passes from one body to another, the electricity in all the bodies in the neighborhood is affected. Henry magnetized a needle in a long conductor, by the discharge from a cloud, more than a mile from the conductor. If a discharge passes down a rod, attached to a powder house, may it not cause a spark to pass from one receptacle for powder to another, and thus inflame the whole? The electrical plenum, which Henry supposed, is no doubt disturbed, and to great distances; but the effect diminishes with the distance. If all the principal conductors about a building can be connected with a lightning rod, there is no danger of a discharge; for it is only in leaving or entering a conductor that electricity produces heating effects: but if not, the rod is safer at a moderate distance from the building. The rate at which electricity moved was another of the experiments of Franklin. A wire was led over a great extent of ground, and a discharge passed through it. No interval could be perceived between the time of the spark passing to and from the wire at the two ends. Not

long since, Wheatston of England, aided by our own great mechanic, Saxton, solved the problem. This has induced Arago, of France, to propose to test the rival theories of light, by similar means—to measure thus a velocity, to detect which has heretofore required a motion over the line of the diameter of the earth's orbit.

In galvanism, our countrymen have made many important discoveries. Dr. Hare invented instruments of such great power as well to deserve the names of calorimeter and deflagrator. The most refractory substances yielded to the action of the deflagrator, melting like wax before a common fire. Even charcoal was supposed to be fused in the experiments of Hare and Silliman, and the visionary speculated on the possibility of black as well as white diamonds. Draper, by his most ingenious galvanic battery, of two metals and two liquids, with one set of elements, in a glass tube not the size of the little finger, was able to decompose water. Farraday, of England, discovered the principle, that when a current of electricity is set in motion, or stopped in a conductor, a neighboring conductor has a current produced in the opposite direction. Henry proved that this principle might be made available to produce an action of a current upon itself, by forming a conductor in the whirls of a spiral, so that sparks and shocks might be obtained by the use of such spirals, when connected with a pair of galvanic plates, a current from which could give no sparks and no shocks. Henry's discoveries of the effects of a current in producing several alternations in currents in neighboring conductors,—the change of the quality of electricity which gives shocks to the muscles into that producing heat, and *vice versa*,—his mode of graduating these shocks,—his theoretical investigations into the causes of these alterations,—are abstruse, but admirable; and his papers have been republished throughout Europe. The heating effects of a galvanic current have been applied by Dr. Hare to blasting. The accidents which so often happen in quarries may be avoided by firing the charge from a distance, as the current which heats the wire, passing through the charge, may be conveyed, without perceptible diminution, through long distances. A feeble attempt to attribute this important invention of Dr. Hare to Col. Pasley, an English engineer, has been abandoned. This is the marvellous agent by which our eminent countryman, Morse, encouraged by an appropriation made by Congress, will, by means of his electric telegraph, soon communicate information forty miles, from Washington to Baltimore, more rapidly than by whispering in the ear of a friend sitting near us. A telegraph on a new plan at that time, invented by Mr. Grout, of Massachusetts, in 1799, asked a question and received an answer in less than ten minutes through a distance of ninety miles. The telegraph of Mr. Morse will prove, I think, superior to all others; and the day is not distant when, by its aid, we may perhaps ask questions and receive replies across our continent, from ocean to ocean, thus uniting with steam in enlarging the limits over which our republic may be safely extended.

Many of our countrymen have contributed to the branch which regards the action of electrified and magnetic bodies. Lukens' application of magnetism to steel, (called *touching*,) the compass of Bissel for detecting local attraction, of Burt for determining the variation of the compass, and the observations on the variations of the needle made by Winthrop and Dewitt, deserve notice and commendation. Not long since, Gauss, of Germany, invented instruments, by which the changes of magnetic variation and force could be accurately determined. Magnetic action is ever varying. The needle does not point in the same direction for even a few minutes together. The force of magnetism, also, perpetually varies. True as the

needle to the pole, is not a correct simile for the same place, and, if we pass from one spot to another, is falsified at each change of our position; for the needle changes its direction, and the force varies. Enlarged and united observations, embracing the various portions of the world, must produce important results. The observations at Philadelphia, conducted by Dr. A. D. Bache, and now continued by him under the direction of the Topographical Bureau, are of great value, and will, it is hoped, be published by Congress. Part of them have already first seen the light in Europe—a result much to be regretted, for we are not strong enough in science to spare from the national records the contributions of our countrymen.

These combined observations, progressing throughout the world, are of the highest importance. The University of Cambridge, the American Philosophical Society, and Girard College, have erected observatories; and one connected with the Depot of Charts and Instruments, has been built last year in this city by the Government, and thoroughly furnished with instruments for complete observations The names of Bache, Maury, Gillis, Pierce, Lovering, and Bond, are well known in connection with these establishments.

A magnetic survey of Pennsylvania has been made by private enterprise, and the beginning of a survey in New York. Loomis has observed in Ohio, Locke in Ohio and Iowa, and to him belongs the discovery of the position of the point of greatest magnetic intensity in the Western World. Most interesting magnetic observations (now in progress of publication by Congress) are the result of the toilsome, perilous, and successful expedition, under Commander Wilkes, of our navy, by whom was discovered the Antarctic continent, and a portion of its soil and rock brought home to our country.

The analogy of the auroral displays with those of electricity in motion, were first pointed out by Dr. A. D. Bache, whose researches, in conjunction with Lloyd of Dublin, to determine whether differences of longitude could be measured by the observations of small simultaneous changes in the position of the magnetic needle, led to the knowledge of the curious fact, that these changes, which had been traced as simultaneous, or nearly so, in the continent of Europe, did not so extend across the Atlantic.

Kindred to these two branches, are electro-magnetism and magneto-electricity, connected with which, as discoverers, are our countrymen Dana, Green, Hare, Henry, Page, Rogers, and Saxton. The reciprocal machine for producing shocks, invented by Page, and the powerful galvanic magnet of Henry, are entitled to respectful notice. This force, it was thought, might be substituted for steam; but no experiments have as yet established its use, on any important scale, as a motive power. The fact that an electrical spark could be produced by a peculiar arrangement of a coil of wire, connected with a magnet, is a recent discovery; and the first magneto-electric machine capable of keeping up a continuous current was invented by Saxton.

Electricity and magnetism touch in some points upon heat. Heat produces electrical currents; electrical currents produce heat. Heat destroys magnetism. Melted iron is incapable of magnetic influence. Reduction of temperature in iron so far decreases the force, that a celebrated philosopher made an elaborate series of experiments to ascertain whether a great reduction of temperature might not develope magnetic properties in metals other than iron. This branch of thermo-electricity has received from us but little attention. Franklin's experiments, by placing dif-

ferently colored cloths in the snow, and showing the depth to which they sunk, are still quoted, and great praise has been bestowed abroad on a more elaborate series of experiments, by a descendant of his, Dr. A. D. Bache, proving that this law does not hold good as to heat, unaccompanied by light. The experiments of Saxton and Goddard demonstrate that solid bodies do slowly evaporate. It is proper here to mention our countryman, Count Rumford, whose discoveries as to the nature and properties of heat, improvement in stoves and gunnery, and in the structure of chimneys and economy of fuel, have been so great and useful.

Light accompanies heat of a certain temperature. That it acts directly to increase or decrease magnetic force, is not yet proved; and the interesting experments made by Dr. Draper, in Virginia, go to show that is without magnetic influence. The discussion of this subject forms the branch of optics, touching physical science on one side, the most refined, and the highest range of mathematics on the other. Rittenhouse first suggested the true explanation of the experiment, of the apparent conversion of a cameo into an intaglio, when viewed through a compound microscope, and anticipated many years Brewster's theory. Hopkinson wrote well on the experiment made by looking at a street lamp through a slight texture of silk. Joscelyn, of New York, investigated the causes of the irradiation manifested by luminous bodies, as for instance the stars. Of late, photographic experiments have occupied much attention, and Draper has advanced the bold idea, supported by experiment, that the agent in the so called photography, is not light, nor heat, but an agent differing from any other known principle. Henry has investigated the luminous emanation from lime, calcined with sulphur, and certain other substances, and finds that it differs much from light in some of its qualities.

Astronomy is the most ancient and highest branch of physics. One of our earliest and greatest efforts in this branch was the invention of the mariners' quadrant, by Godfrey, a glazier of Philadelphia. The transit of Venus, in the last century, called forth the researches of Rittenhouse, Owen, Biddle, and President Smith, near Philadelphia, and of Winthrop, at Boston. Two orreries were made by Rittenhouse, as also a machine for predicting eclipses. Most useful observations, connected with the solar eclipses, from 1832 to 1840, have been made by Paine, of Boston. We have now well supplied observatories at West Point, Washington, Cambridge, Philadelphia, Hudson, Ohio, and Tuskaloosa, Alabama, and the valuable labors of Loomis, Bartlett, Gilliss, Bond, Pierce, Walker, and Kendal, are well known. Mr. Adams, so distinguished in this branch and that of weights and measures, laid last year the corner-stone of an observatory at Cincinnati, where will soon be one of the largest and most powerful telescopes in the world. Most interesting observations as to the great comet of 1843 were made by Alexander, Anderson, Bartlett, Kendal, Pierce, Walker, Downes, and Loomis, and valuable astronomical instruments have been constructed by Amasa Holcomb, of Massachusetts, and Wm. J. Young, of Philadelphia.

It is difficult to class the brilliant meteors of November the 13th, 1833. If such meteors are periodic, the discovery was made by Professor Olmsted; and Mr. Herrick, of New Haven, has added valuable suggestions. The idea that observers, differently placed, of the time of appearance and disappearance of the same meteor, would give the means of determining differences of longitude, was first applied in our own country, where the difference of longitude of Princeton and Philadelphia was determined by observations of Henry and Alexander, Espy and Bache. In meteorology our countrymen have succeeded well. Dr. Wells, of South Carolina,

elaborated his beautiful and original theory of the formation of dew, and supported it by many well-devised and conclusive experiments. The series of hourly observations, by Professor Snell and Capt. Mordecai, are well known; and the efforts of New York and Pennsylvania, of the medical department of the army, and its present enlightened head, Dr. Lawson, have much advanced this branch of science. The interesting question, does our climate change, seems to be answered thus far in the negative, by registers kept in Massachussetts and New York. There are two rival theories of storms. That of Redfield, of a rotary motion of a wide column of air, combined with a progressive motion in a curved line. Espy builds on the law of physics, examines the action of an upmoving column of air, shows the causes of its motion and the results, and then deduces his most beautiful theory of rain and of land and water-spouts. This he puts to the test of observation; and in the inward motion of wind towards the centre of storms, finds a striking verification of his theory. This theory is also sustained by the overthrow or injury, in the recent tornado at Natchez, of the houses whose doors and windows were closed, whilst those which were open mostly escaped unhurt. Mr. Espy must be considered, not only here, but throughout the world, as the head of this branch of science. This subject has been greatly advanced by Professor Loomis, whose paper has been pronounced, by the highest authority, to be the best specimen of inductive reasoning, which meteorology has produced. The most recent and highly valuable meteorological works of Dr. Samuel Forry are much esteemed. Many important discoveries in pneumatics were made by Dr. Franklin and Count Rumford, and the air pump was also greatly improved by Dr. Prince, of Salem.

Chemistry, in all its departments, has been successfully pursued among us. Dana, Draper, Ellet, Emmet, Hare, the Mitchels, Silliman, and Torrey, are well known as chemical philosophers; and Booth, Boyé, Chilton, Keating, Mather, R. Rogers, Seybert, Shepherd, and Vanuxen, as *analysts;* and F. Bache, Webster, Greene, Mitchell, Silliman, and Hare, as authors. In my native town of Northumberland, Pennsylvania, resided two adopted citizens, most eminent as chemists and philosophers, Priestly and Cooper. The latter, who was one of my own preceptors, was greatly distinguished as a writer, scholar, jurist, and physician, as well as a chemist. Priestly, although I do not concur in his peculiar views of theology, was certainly one of the most able and learned of ecclesiastical writers, and possessed also a mind most vigorous and original. His discoveries in pneumatic chemistry have exceeded those of any other philosopher. He discovered vital air, many new acids, chemical substances, paints, and dyes. He separated nitrous and oxygenous airs, and first exhibited acids and alkalies in a gaseous form. He ascertained that air could be purified by the process of vegetation, and that light evolved pure air from vegetables. He detected the powerful action of oxygenous air upon the blood, and first pointed out the true theory of respiration. The eudiometer, a most curious instrument for fixing the purity of air, by measuring the proportion of oxygen, was discovered by Dr. Priestly. He lived and died in my native town, universally beloved as a man and greatly admired as a philosopher. Chemistry has actively advanced among us during the present century. Hare's compound blow-pipe came from his hand so perfect, in 1802, that all succeeding attempts of Dr. Clark, of England, and of all others, in Europe and America, to improve upon it or go beyond the effects produced, have wholly failed. His mode of mixing oxygen and hydrogen gases, the instant before burning them, was at once simple, effective, and safe. The most refractory metallic and mineral substances

yielded to the intense heat produced by the flame of the blow-pipe. In chemical analysis, the useful labors of Keating, Vanuxen, Seybert, Booth, Clemson, Litton, and Moss, would fill many volumes. In organic chemistry, the researches of Clark Hare and Boyé were rewarded by the discovery of a new ether, the most explosive compound known to man. Mitchel's experiments on the penetration of membranes by gases, and the ingenious extension of them by Dr. Rogers, are worthy of all praise. The softening of India rubber, by Dr. Mitchell, renders it a most useful article. Dyer's discovery of soda ash yielded him a competence. Our countrymen have also made most valuable improvements in refining sugar, in the manufacture of lard oil, and stearin candles, and the preservation of timber by Earle's process. Sugar and molasses have been extracted in our country from the corn stalk, but with what, if any profit, as to either, is not yet determined. No part of mechanics has produced such surprising results as the steam engine, and our countrymen have been among the foremost and most distinguished in this great and progressive branch. When Rumsey, of Pennsylvania, made a steamboat which moved against the current of the James river four miles an hour, his achievement was so much in advance of the age, as to acquire no public confidence. When John Fitch's boat stemmed the current of the Delaware, contending successfully with sail boats, it was called, in derision, the *scheme boat.* So the New Yorkers. When the steamboat of their own truly great mechanic, Stevens, after making a trip from Hoboken, burnt accidentally one of its boiler tubes, it was proclaimed a failure. Fulton also encountered unbounded ridicule and opposition, as he advanced to confer the greatest benefits on mankind, by the application of steam to navigation. So Oliver Evans, of Pennsylvania, (who has made such useful improvements in the flour mill,) was pronounced insane, when he applied to the Legislatures of Pennsylvania and Maryland for special privileges in regard to the application of steam to locomotion on common roads. In 1810, he was escorted by a mob of boys, when his amphibolas was moved on wheels by steam more than a mile through the streets of Philadelphia, to the river Schuylkill, and there, taking to the water, was paddled by steam to the wharves of the Delaware, where it was to work as a dredging machine. Fulton's was the first successful steamboat, Stevens's the first that navigated the ocean, Oliver Evans's the first high-pressure engine applied to steam navigation. Stevens's boat, by an accident, did not precede Fulton's, and Stevens's engine was wholly American, and constructed entirely by himself, and his propeller resembled much to that now introduced by Ericsson. Stevens united the highest mechanical skill with a bold, original, inventive genius. His sons, (especially Mr. Robert L. Stevens, of New York,) have inherited much of the extraordinary skill and talent of their distinguished father. The first steamboat that ever crossed the ocean was built by one of our countrymen, and their skill in naval architecture has been put in requisition by the Emperor of Russia and the Sultan of Turkey. The steam machines invented by our countrymen to drive piles, load vessels, and excavate roads, are most ingenious and useful. The use of steam, as a locomotive power, upon the water and the land, is admirably adapted to our mighty rivers and extended territory. From Washington to the mouth of the Oregon is but one half, and to the mouth of the Del Norte but one fourth, of the distance of the railroads already constructed here; and to the latter point, at the rate of motion (thirty miles an hour) now in daily use abroad, the trip would be performed in two days, and to the former in four days. Thus steam, if we measure distance by the time in which it is traversed, renders our whole Union, with its

most extended limits, smaller than was the State of New York ten years since. Steam cars have been moved, as an experiment, both here and abroad, many hundred miles, at the rate of sixty miles an hour; but what will be the highest velocity ultimately attained in common use, either upon the water or the land, is a most important problem, as yet entirely unsolved. Our respected citizens, Morey and Drake, have endeavored to substitute the force of explosion of gaseous compounds for steam. The first was the pioneer, and the second has shown that the problem is still worth pursuing to solution. An energetic western mechanic made a bold but unsuccessful effort to put in operation an engine acting by the expansion of air by heat; and a similar most ingenious attempt was made by Mr. Walter Byrnes, of Concordia, Louisiana; as also to substitute compressed air, and air compressed and expanded, as a locomotive power. All attempts to use air as a motive power, except the baloon, the sail vessel, the air gun, and the windmill, have thus far failed; but what inventive genius may yet accomplish in this respect, remains yet undetermined. There is, it is true, a mile or more of pneumatic railway used between Dublin and Kingston. An air pump driven by steam exhausts the air from a cylinder in which a piston moves; this cylinder is laid the whole length of the road, and the piston is connected to a car above, so that, as the piston moves forward on the exhaustion of the air in front of it, the car is also carried forward. The original idea of this pneumatic railway was derived from the contrivance of an American, quite unknown to fame, who, as his sign expressed it, showed to visitors a new mode of carrying the mail, more simple, and quite as valuable, practically, as this atmospheric railway. The submerged propeller of Ericsson, and the submerged paddle wheel, the rival experiments of our two distinguished naval officers, Stockton and Hunter, are now candidates for public favor; and the Princeton on the ocean as she moves in noiseless majesty, at a speed never before attained at sea, seems to attest the value of one of these experiments, whilst the other is yet to be determined. The impenetrable iron steam vessel of Mr. Stevens is not yet completed, nor have those terrific engines of war, his explosive shells, yet been brought to the test of actual conflict. Success to these great efforts of our gallant navy and patriotic mechanics, to increase our comforts in peace and augment our power and resources in war; and may the West soon participate more largely in these great enterprises, by the establishment of naval depots upon their waters, as first suggested by the vigorous and original mind of Capt. John Sanders, of the Engineer Corps, and sustained and advocated by the patriotic and accomplished Maury.

In curious and useful mechanical inventions, our countrymen are unsurpassed, and a visit to our new and beautiful Patent Office will convince the close observer that the inventive genius of America never was more active than at the present moment. The machines for working up cotton, hemp, and wool, from their most crude state to the finest and most useful fabrics, have all been improved among us. The cotton gin of Eli Whitney has altered the destinies of one-third of our country, and doubled the exports of the Union. The ingenious improvements for imitating medals, by parallel lines upon a plain surface, which, by the distances between them, give all the effects of light and shade that belong to a raised or depressed surface, invented by Gobrecht and perfected by Spencer, has been rendered entirely automatic by Saxton, so that it not only rules its lines at proper distances and of suitable lengths, but when its work is done it stops. In hydraulics, we have succeeded well; and the great aqueduct over the Potomac at Georgetown, constructed

by Major Turnbull, of the Topographical Corps, exhibits new contrivances, in overcoming obstacles never heretofore encountered in similar projects, and has been pronounced in Europe one of the most skilful works of the age.

The abstract mathematics does not seem so well suited to the genius of our countrymen as its application to other sciences. Those among us who have most successfully pursued the pure mathematics, are chiefly our much esteemed adopted citizens, such as Nulty, Adrain, Bonnycastle, Gill, and Hassler. Bowditch was an American, and is highly distinguished at home and abroad. Such men as Plana and Babbage rank him among the first class, and his commentary on the Méchanique Céleste, of Laplace, has secured him a niche in the temple of fame, near to that of its illustrious author. Anderson and Strong are known to all who love mathematics, and Fischer was cut off by death in the commencement of a bright career. And may I here be indulged in grateful remembrance of two of my own preceptors, Dr. R. M. Patterson and Eugene Nulty. The first was the Professor at my Alma Mater (the University of Pennsylvania) in natural philosophy and the application of mathematics to many branches of science. He was beloved and respected by all the class, as the courteous gentleman and the profound scholar; and the mint of the United States, now under his direction, at Philadelphia, has reached the highest point of system, skill, and efficiency. In the pure mathematics, Nulty is unsurpassed at home or abroad. In an earlier day, the elder Patterson, Ellicot, and Mansfield, cultivated this branch successfully in connection with astronomy.

A new and extensive country is the great field for descriptive natural history. The beasts, birds, fishes, reptiles, insects, shells, plants, stones, and rocks, are to be examined individually and classed; many new varieties and species are found, and even new genera may occur. The learned Mitchell, of New York, delighted in these branches. The eminent Harlan, of Philadelphia, and McMurtrie, were of a later and more philosophic school. Nuttall, of Cambridge, has distinguished himself in natural history, and Haldeman is rising to eminence.

Ornithology is one of the most attractive branches of natural history. Wilson was the pioneer; Ord, his biographer followed, and his friend Titian Peale; Audubon is universally known, and stands prëeminent; and the learned Nuttall, and excellent and enthusiastic Townsend are much respected. Most of these men have compassed sea and land, and encountered many perils and hardships to find their specimens. They have explored the mountains of the North, the swamps of Florida, the prairies of the West, and accompanied the Exploring Expedition to the Antarctic, and round the world. As botanists, the Bartrams, Barton, and Collins, of Philadelphia, Torrey, of New York, Gray and Nuttall, of Cambridge, Darlington, of Westchester, are much esteemed. The first botanical garden in our country was that of the Bartons, near Philadelphia; and the first work on botany was from Barton, of the same city. Logan, Woodward, Brailsford, Shelby, Cooper, Horsefield, Colden, Clayton, Muhlenburg, Marshal, Cutler, and Hosack, were also distinguished in this delightful branch.

A study of the shells of our country has raised to eminence the names of Barnes, Conrad, Lea, and Raffinesque. The magnificent fresh water shells of our western rivers are unrivalled in the old world, in size and beauty. How interesting would be a collection of all the specimens which the organic kingdom of America presents, properly classified, and arranged according to the regions and States whence they were brought. Paris has the museum of the natural history of France, and

London of Great Britain; but Washington has no museum of the United States, though so much richer in all these specimens.

In mineralogy, the work of Cleveland is most distinguished. Shepherd, Mather, Troost, Torrey, and a few others, still pursue mineralogy for its own sake; but, generally, our mineralogists have turned geologists, studying rocks on a large scale, instead of their individual constituents, and vying with their brethren in Europe in bold and successful generalization, and in the application of physical science to their subject. McClure was one of the pioneers, and Eaton and Silliman contributed much to the stock of knowledge. This school has given rise to the great geological surveys made or progressing in several of the States. Jackson, in Maine,—Hitchcock, in Massachusetts,—Vanuxen, Conrad, and Mather, in New York,—the Rogers' in New Jersey, Pennsylvania, and Virginia,—Ducatel, in Maryland,—Owen and Locke, in the West,—Troost, in Tennessee,—Horton, in Ohio,—the courageous, scientific and lamented Nicolet, in Missouri, Iowa, and Wisconsin, have made contributions, not only to the geology of our country, but to the science of geology itself, which are conceded to be among the most valuable of the present day. The able reports of Owen and Nicolet were made to Congress, and deserve the highest commendation.

In geographical science, the explorations of Lewis and Clark,—of Long, Nicolet, and the able and intrepid Fremont,—the effective State survey of Massachusetts,—the surveys of our public lands,—the determination of the boundaries of our States, and especially those of Pennsylvania, by Rittenhouse and Elliot, of part of Louisiana, by Graham and Kearney, of Michigan, by Talcott, and of Maine, by Graham,—have gained us great credit. The national work of the coast survey, begun by the late Mr. Hassler, and prosecuted through all discouragements and difficulties by that indomitable man, has reflected honor upon his adopted country, through the Government which liberally supported the work, and through whose aid it is now progressing, under new auspices, with great energy. The lake survey is also now advancing under the direction of Capt. Williams, of the Topographical Corps. Among the important recent explorations, is that of the enlightened, untiring, and intrepid Fremont, to Oregon, which fixes the pass of the rocky mountains within twenty miles of the northern boundary of Texas. Lieutenant Fremont is a member of the Topographical Corps, which, together with that of Engineers, contains so many distinguished officers, whose labors, together with those of their most able and distinguished chiefs, Col. Totten and Col. Abert, fill so large a portion of the public documents, and are so well known and highly appreciated by both Houses of Congress and by the country. The Emperor of Russia has entered the ranks of our Topographical Corps, and employed one of their distinguished members, Capt. Whistler, to construct his great railroad from St. Petersburg to Moscow. The travels of our countrymen, Stephens, to Yucatan and Guatemala, to Egypt, Arabia, and Jerusalem, and of Dr. Grant to Nestoria, have increased our knowledge of geography and of antiquities, and have added new and striking proofs of the truths of christianity.

Fossil geology occupied much of the time and attention of the great philosopher and statesman Jefferson, and he was rewarded by the discovery of the megatherium. The mastodon, exhumed in 1801, from the marl pits of New York, by Charles Wilson Peale, has proved but one of an order of animal giants. Even the tetracaulodon, or tusked mastodon, of Godman, upon which rested his claims to fame, is not the most curious of this order, as the investigations of Hays and Hor-

ner have proved. This order has excited the attention, not only of such minds as Cooper, Harlan, and Hays, but has also occupied the best naturalists of France, Britain, Germany, and Italy.

Fossil conchology has attracted the attention of Conrad, the Lee's, and the Rogers', not only calling forth much ingenuity in description and classification, but also throwing great light upon the relative ages of some of the most interesting geological formations. The earthquake theory of the Rogers' is one of the boldest generalizations, founded upon physical reasoning, which our geologists have produced. In the parallel ridges into which the Apalachian chain is thrown, they see the crests of great earthquake waves, propagated from long lines of focal earthquake action, more violent than any which the world now witnesses. The geologist deals in such sublime conceptions as a world of molten matter, tossed into waves by violent efforts of escaping vapors, cooling, cracking, and rending, in dire convulsion. He then ceases to discuss the changes and formation of worlds, and condescends to inform us how to fertilize our soil, where to look for coal and iron, copper, tin, cobalt, lead, and where we need not look for either. He is the Milton of poetry, and the Watt of philosophy. And here let me add, that the recent application of chemistry to agriculture is producing the most surprising results, in increasing and improving the products of the earth, and setting at defiance Malthus' theory of population.

In medicine, that great and most useful branch of physics, our countrymen have been most distinguished. From the days of the great philosoper, physician, patriot, and statesman, Benjamin Rush, down to the present period, our country has been unsurpassed in this branch; but I have not time even to give an outline of the eminent Americans, whose improvements and discoveries in medicine have contributed so much to elevate the character of our country, and advance the comfort and happiness of man. Rush, one of the founders of this branch in America, was one of the signers of our Declaration of Independence, and his school of medicine was as independent and national as his course in our revolutionary struggle. Statistics are chiefly concerned, as furnishing the facts connected with government and political economy, but they are also ancillary to physics. The statistical work of Mr. Archibald Russell, of New York, which immediately preceded the last census, contained many valuable suggestions, some of which were adopted by Congress: and had more been incorporated into the law, the census would have been much more complete and satisfactory. The recent statistical work of Mr. George Tucker, of Virginia, on the census of 1840, is distinguished by great talent and research, and is invaluable to the scholar, the philosopher, the statesman, and philanthropist.

Most imperfect as has been this sketch—omitting, from necessity, so many who ought to have been named—I trust it presents some proofs, that our countrymen have not failed to contribute their full proportion to the inductive sciences, whilst they have, at the same time, established and administered a Government founded upon principles new and sublime, now tested by great and happy results, and as far transcending all its predecessors as the happiness of the whole people is above that of the few. Our beautiful system of a confederate and representative republic appeals to Heaven for light, and aid, and support; and infidelity only can deny the success of such a Government of the people; for the sacred volume most clearly predicts the advancing march of mankind and their progressive capacity for self government, moving onwards and upwards in knowledge, in virtue, and religion,

until they shall have reached the epoch of millennial glory so clearly announced in the scriptures of truth. The age in which we live is marked by wonderful advances in the physical sciences. This is emphatically the age of progress, and there is now no stationary period in any branch of physics. The mystic epoch also has disappeared, and alchemy has yielded to chemistry, astrology to astronomy, and necromancy or magic to the realities of natural philosophy. The only branch which seems to go back to the mystic sciences is animal magnetism, in regard to which I shall pronounce no judgment. The present age deals with facts; from facts we ascend to theories, and finally to universal laws. We have many books on physics; but why might we not have charts, to be suspended as maps in our rooms, where in each branch might be noted the facts in their chronological order, the theories and final laws, with the names of the great discoverers? If this would be too extensive, as regards all ages and countries, it might be confined to our own, and gratify the pride and stimulate the zeal of the nation.

Among the most valuable results of inductive science, is the strong additional evidence obtained in favor of the great and glorious truths of the christian religion. The fabulous zodiac, which carried back the observations of astronomers to a period beyond the mosaic account of the creation of man, has disappeared before the light of modern astronomy. The myriads of bones of giant animals, which could only have lived and found subsistence in a tropical, or at least a temperate climate, now scattered in profusion in Northern Siberia, along the verge of the arctic circle, attest the effects and reality of a general deluge. The pyramids of Egypt, which had remained dumb for thousands of years, have been made to speak; and so far as their hieroglyphics have found a voice, it proclaims many of the facts recorded in the sacred history. Whilst the advance of science has contributed so much to our happiness and comfort here, has it no connection with our eternal destiny? Is all our knowledge buried in the grave? and does the untutored savage start in the next world at the same point with Sir Isaac Newton, in the race towards the goal of infinite knowledge—that point, towards which, like the asymptotes of the hyperbolic curve, we shall forever approximate but never attain? Does knowledge die with the physical frame; or does it constitute a part of that soul whose phenomena after death we can no longer observe, but which, as an essence of the great Creator, shall be as eternal as his own existence?

And now, having detained you too long in this most imperfect sketch of some of the improvements and discoveries of our countrymen in physics, let me close by declaring, that if the men of science of the Union will come forward, and unite with the people in sustaining and advancing the National Institute, they will make it worthy of the greatest and freest nation of the world, and contribute much towards placing our own beloved country as far above all others on the roll of knowledge as it now transcends all its contemporaries and predecessors in a government administered by and for the benefit of the whole people.

LETTER

FROM THE

HON. LEVI WOODBURY,

UNITED STATES SENATE, DIRECTOR OF THE NATIONAL INSTITUTE.

SENATE CHAMBER, *February* 28, 1844.

DEAR SIR: It will not be in my power, as requested by the committee of the National Institute, to read a paper or deliver an address at the approaching meeting of the friends of science, with the members of the National Institute. But allow me to assure you that I do not decline from any want of interest in the success of the Institute. I think such a Society as that is wanted at the seat of Government quite as much for purposes connected with the Government itself, as for other objects beneficial to individuals, and to the great cause of science and letters.

It may be made a very appropriate agent in the execution of several important public duties. Various articles of curiosity and interest here are public property, and, being such, are to be taken care of. They are connected with our mines—our Indian and foreign intercourse—our patents and copy-rights, and matters of natural history and discovery. None can doubt, that some of these could be best preserved and prove most useful in the custody of men of literary taste. The specimens of lead, copper, iron, gold, and rocks, which have been collected in the public offices, and many of which help to illustrate the value, no less than the character of our soil in several portions of the public domain, can be well arranged and well kept for public use, only by persons acquainted with the subjects of mineralogy and geology, and separated, in a great degree, from the pressure of official labor and turmoils of party strife. So, without the aid of such persons, the rare plants and useful woods and grasses that cover our territory, as well as the new animals, with which our rivers, lakes, and wilderness abound, will, in many cases, both live and perish in vain—even more vain than the mammoth, whose bones at least survive, or such other extinct animals as are partly known only in their fossil remains. Nor can posterity do justice to us or the Indian races, who preceded us in the enjoyment of our present rich inheritance, or appreciate in several respects their true character and condition, unless we collect and preserve their arms and implements of hunting, their dresses and rude tools, and indeed every thing which tends to illustrate the state of society which prevailed among them, and the progress of civilization since. Mementos like these are living fragments of the past. In such relics, as well as in rocks, plants, shells, animals, inventions and machinery, over our vast country, carefully gathered together, and skilfully transmitted, we have portions of history embodied, beyond the power of misrepresentation, as if a part of the past, while the sands of time were running, had become petrified in its course, and thus been able to be handed down to latest generations, with increased certainty and instruction. How superior a service is thus performed for posterity, usefully illustrating many of the arts, habits, and changes of social life!

It is a gratifying reflection, that the General Government has seldom been backward in making researches and collections. At times, it has been lavish in such as were suited to advance the great interests of commerce, or the value and sale of its public lands, or a wise legislation over the numerous Indian tribes under its paternal guardianship. It has in this way made its navy assist to explore, not only our own shores and seas, but the most distant regions—its army note temperatures and winds, as well as examine rivers, and mountains, and prairies, from the Atlantic to the Pacific—its geologists scrutinize soils and quarries—its astronomers survey our coasts—and its engineers measure cataracts and lakes, harbors, canals, and railroads, till the public offices overflow with specimens of their useful labors. But how little will be the use of much of them under the yearly ravages of time, unless, by public associations like the Institute, science is kept up here at a standard high enough to appreciate the importance of such labors, and to enlist with zeal in their preservation and diffusion. As a single instance out of many, what will be the utility of most collected by the late exploring expedition, ploughing, as it did, "so rich a furrow round the globe," if all the gathered treasures are not carefully preserved and exhibited, in a useful manner, to the inspection of the learned, and the liberal curiosity of the people at large. Even commerce itself, which is made so prominent an object in the constitution, no less than in our legislation, and which is so justly considered the pioneer of civilization and wealth in all ages, would seem to lose half its charms, if it were cherished without any regard to intellectual improvement, and were looked after with a view merely to procure new luxuries, or new means of corrupt indulgence, rather than, as the great instrument to interchange letters, and arts, and curiosities; and, beside new inventions, new machinery, new fruits, plants, and animals, to send home every thing calculated to increase that knowledge, which is a power so much nobler than mere wealth or political dominion. Few can doubt, that while the Government continues to lend efficient aid to such objects, through its protection of commerce, and encourages the improvement of mankind by copy-rights for new books, and patents for all useful discoveries; and while, in the promotion of similar objects, it establishes naval and military schools, and forms congressional and law libraries—few can doubt its power, any more than its glory, to discharge well such important trusts through any agents which are most appropriate. While the collections in natural history, and the curiosities were few, not much skill, time or expense was required to take care of them. But the Government has always been obliged to furnish some of each of these for that object. Now, that the articles to be arranged and preserved have been multiplied greatly, more science, as well as expense, are required; and, to use the Institute for such a purpose, at the seat of Government, within the District of Columbia, is only to continue to defray the expense of taking care of these articles; and that by persons possessing a taste, intelligence, and zeal, in respect to such matters, which give a strong assurance of fidelity and success.

But I am extending this communication too far. Allow me to add, however, before closing, another circumstance, which, with some, may have peculiar weight. The members of the Institute have never desired to render the collections in their charge matters of private property or private emolument; and so far as I am acquainted with their views, not one would object that their collections and specimens, if not now public property, should be made so expressly by law, and be thus dedicated exclusively to public purposes of science and letters.

It is consolatory to reflect, that the Institute can thus be employed and patronized by the Government, without exercising any doubtful powers; and, while doing it, can advance both the public interests and the cause of learning. It is always auspicious to that cause, when a government can participate in its glories, so much more congenial to the genius of an enlightened people, and so much more ennobling to their free institutions, than many of the ephemeron strifes of political warfare. Still more will it be a matter of congratulation, if the Institute should also be used by the Government in the performance of a sacred trust, which it has assumed in relation to the Smithsonian fund. The money for this has been actually accepted and placed in the treasury to the extent of more than half a million of dollars. The noble task of *increasing and diffusing knowledge among men*, by means of that liberal trust, the General Government has, in the face of the world, undertaken to see performed; and through whom can it more efficiently and creditably act in executing such a trust, than a body of men, under its own eye, its own directions, its own laws—men, also, who, asking nothing but payment of the actual expenses incurred in taking care of the public property, are willing to labor in this cause without fee or reward, beyond the consciousness of being useful to their race and extending wider the dominion of science and sound knowledge?

Respectfully, yours,

LEVI WOODBURY.

FRANCIS MARKOE, JR., ESQ.,
Corresponding Secretary of the National Institute.

ADDRESS,

BY

HON. JOHN QUINCY ADAMS.

The Hon. John Quincy Adams, on taking the chair, to preside at the meeting on Monday morning the 8th of April, addressed the audience in the following manner:

In taking the chair of this meeting in the place of others so much more worthy of occupying it, I feel that there is due from me to the members of the National Institute, to the learned and eloquent sons of science who, during the last week, have brought the precious fruits of their genius and their toils, and have deposited them as free-will offerings on the altar of their country; and to our country, an apology for the apparent indifference to the cause for which they have assembled here, and to the entertainment and instruction so liberally contributed by them to all who have had the happiness of hearing them, inferrible from the fact of the very small portion of attendance that it has been in my power to give to the highly interesting meetings of the last week.

The only cause of my non-attendance at the morning meetings has been that they were necessarily appointed to be held at hours when the indispensable discharge of the duties of a public trust required my attendance elsewhere; an obstacle which even now would have disabled me for attendance here, but for the melancholy casualty which has suspended the deliberations of the representatives of the people on yonder Capitol Hill. It is not that I deem those deliberations more honorable or more important to the welfare of the country than the occupations in which you have been here engaged. The cultivation of the heart and mind of a nation, by devotion of time and toil to the pursuits of science, contributes as much, aye more, to the happiness and dignity of the human being, than the most faithful application of the faculties of the representative to the wishes and interests of his constituents. But I have not deemed myself at liberty to supersede the obligations of positive and stipulated duty, even for the voluntary participation in labors, perhaps of a higher order and of more pleasing performance, but without the same comparative sense of duty, and with results only of personal gratification.

And I avail myself of this occasion to express my regret that, having taken an humble part in the establishment of this Institution from its first foundation, under the auspices of Mr. Poinsett, I have been able to contribute so little to its promotion and advantage, and to add my heartfelt satisfaction at the prosperity which, by the untiring exertions and fervid zeal of its executive officers, it has attained. I believe it eminently deserving of the fostering care and liberal patronage of the Congress of the United States, and could anticipate no happier close to my public life than to contribute, by my voice and by my vote, to record the sanction of the nation's munificence to sustain the National Institute devoted to the cause of science.

SMITHSONIAN BEQUEST,

BY THE

HON. RICHARD RUSH.

In submitting a paper to this meeting of the friends of the National Institute, under a circular I had the honor to receive from its committee, I take as the subject of it the Smithsonian Bequest.

I desire to give expression anew to regrets which, as one citizen of the United States, I feel at this bequest not having yet been used as the testator directed. I say anew, having on former occasions expressed them as a corresponding member of the Institute; and I can only seek excuse for doing so again in the interest of the subject, which may even bear to have some things repeated in regard to it, that the impression of facts may not be lost. As long as this bequest remains unapplied, the cause of science and letters suffers in its whole extent, and the United States are liable to the charge of not performing a duty.

How does the case stand, in a few words?

Mr. Smithson left to the United States more than one hundred thousand pounds, to found, in this city of Washington, an institution "for the increase and diffusion of knowledge among men." The United States accepted the bequest. They thus became bound to do what the testator enjoined. Their acceptance raised a trust high in its nature and clear in its terms. They sent an agent to England, the country of the testator, to get the money. It had been lodged in the Court of Chancery, waiting the decision of the law, all the heirs of Mr. Smithson being extinct, or supposed to be so; and this was the contingency upon which his fortune was to go to the United States. The case was one of the first impression. It was new to the archives of the tribunal which had cognizance of it, and excited, by its nature as well as novelty, curiosity and attention in that kingdom. The Crown forbore all claim, on the ground of escheat or otherwise, to the derelict property of the deceased, for the sake of giving speedy and unobstructed effect to the claim of the United States. The will contemplated highly beneficial ends, and, admitting that English law would have sustained it in favor of a foreign nation against any opposition, substantial or technical, which the Crown might have interposed, there was still a liberality and grace in the promptitude with which its representative in the Court of Chancery gave way in favor of the United States, then for the first time appearing as demandants in an English court. Their agent obtained the whole money without stint, and they have now been in possession of it nearly six years. Yet it remains as a thing of no use in their hands.

The fund belongs to us all. Every citizen of the United States has a share in it. As such, every citizen may respectfully but earnestly urge upon Congress its legitimate appropriation, that the blessings bound up with it may no longer be suspended. The longer this suspension continues, the more the fund is thrown upon risks

of never being used at all; and already has part of a generation of men been deprived of its benefits. If not beneath the dignity of the United States to accept the trust, the duty of executing it follows. That duty ought to be performed with reasonable promptitude. If nearly six years be not an ample allowance of time for the wisdom of a nation to determine what is to be done under such a will, the task of ever knowing seems discouraging. I say so with the greatest deference to other opinions, giving utterance only to my own; and having fully supposed, whilst pleading two years ago for bringing the fund into activity, that I was free *then* from the error of haste. Acts of legislation upon momentous and complex subjects often pass within periods more circumscriced, without being chargeable with errors on this score. The most circumspect rule in legislation has seldom gone beyond the requisition to publish a bill one year, that it might be understandingly acted upon the next; and if there may be exceptions to this rule, it is not believed that the Smithsonian case forms one of them; and, supposing that it did, more than double the time implied by such a rule has run out.

Not to use this fund promptly, seems an unfit return for the comity of the tribunal that surrendered it up to us promptly; more promptly, it is believed, than was ever before known in the case of so large a sum once in the meshes of chancery. Whether this would have been done with a fore-knowledge of the delay already witnessed, can only be a subject of conjecture. Non-user works forfeiture as well as misuse; and it is hardly perhaps an overstrained inference to say, that an anticipation of the former, such as has happened, might have forestalled the decree in our favor, in the unrestricted manner in which it was made. It is at least known that the English Court of Chancery is slow to part with trust funds under all ordinary circumstances, without full security that they will not be diverted from their object, or suffered to languish in neglect. That tribunal asked no such security from the United States. It would have implied the possibility of laches in the high trustee. Least of all could that suspicion have existed where the trust bespoke upon its face motives to exclude any other imagination than that of prompt performance. At that epoch our public faith stood in all things unsullied. This thought forces itself upon me. Would that I could drop it—would that it were not necessary to the pursuit of my subject!

But, painful is the consideration, that, in the more recent circumstances of our country, there exists cause for augumented sensibility at our apathy under this beneficent will. History may be seen as well as read. Ours, under some aspects at present, is indeed too painful. The charge upon us of dishonesty, has passed into wide belief, too wide to be effaced soon. To deny it will not efface it: we can only live it down. The impression has not been confined to any one nation among the great nations of the earth: it pervades entire and separate communities, whose united voices will go far towards making up the opinion of mankind. Affected by our intercourse, and smarting under losses, they have been little inclined to discriminate between the demerit which denies just debts, and that which, after contracting them deliberately, utterly fails to pay them; and this in times of peace and plenty, when the productive powers of our country are as great as ever, and all its industry in operation. In Holland, where sensitiveness to pecuniary honor is extreme, nothing excusing non-payment but insolvency brought on in ways free from all exceptions, and accompanied by surrender of every thing—in that old land of former commercial grandeur and constant probity, and in communities adjacent, the taint upon our name is perhaps the deepest, though we may hear

less of it. It is too deep every where. The subject, divested of all exaggeration and rhetoric against us, leaves enough in its naked truth to fill us with wo, and ought to rouse us to our duty.

At such a juncture, when we are viewed with a quicker eye than ever for the discovery of fault—when the friends of popular government every where are weeping over what has happened here, to lay ourselves open, even by a suspicious tardiness, to the imputation of not keeping faith with the great moral interests dependent upon this will, seems most especially unwise. It would be repudiation under a new form, reserved for our once glorious Republic to set the example of—the Republic that Washington founded. In this connection, who can think but in sorrow on the fact that two persons, of birth foreign to our shores—Smithson and Girard—should have selected, the one our whole Union, the other a leading member of it, as their instruments in faithfully using funds left for the increase and diffusion of knowledge in the world, and for the education, upon a vast scale, of orphans; and that twelve years should have elapsed in one case, and nearly six in the other, without witnessing the slightest fruits from their munificent endowments. All is still barrenness or blight to both benefactions. Not an orphan has been educated—so have perished the Frenchman's hopes. Not a step has been taken under the Englishman's injunction—so, thus far, has he mistaken his people. If dialogues of the dead could take place between these two generous-minded philanthropists, it would be easier to conceive what might be said than grateful to an American pen to recount it.

During the periods in question, have we been careless in other fields? Have we been inert in things material? Have we been slumbering over the *main chance*? Quite the reverse. Imagination can hardly group the sum of our achievements. It starts back at the wonders that have been going on; at the bustle, the enterprise, the duplication, the multiplication, in our physical resources. What mountains have not been removed? What caverns not excavated? What waters not turned into new channels? But all will be in vain, if we are seeking a high name among nations; in vain the strides which agriculture, and manufactures, and commerce, and stupendous highways to develope and diffuse each, are making amongst us; or that our ships go to all seas, or that wildernesses disappear before our conquering industry; in vain our increase in population and in all the elements of power; in vain, for the highest fame, all these and the high-sounding boasts that follow. They attest energy, and the freedom which gives it room to act; but in a country where Heaven has showered down its richest natural gifts, these may co-exist with mediocrity and commonness of character, and in part are the results of a physical necessity. In vain, therefore, the whole, unless accompanied by those intellectual distinctions which alone confer, throughout all time, the most genuine and lofty renown. Truly and beautifully has a living writer remarked, that "whatever the power and prosperity of a State, whatever the accumulations of her wealth, or her boasted achievements and possessions, to her intellectual attainments must she look for her highest estimation; on her literature, her science, her arts, her pre-eminence in mind—on her solidity and effulgence in these must she depend for living dignity and deathless fame."

Ennobling the thought, that even nations cannot escape from the conditions by which individual man raises himself to immortality of fame; and if we, as a nation, would reach the moral heights commensurate with what is to be our destiny in political power, it can only be through compliance with these indispensable and

exalted conditions. Our freedom will subserve them, but subordinate forever will be our fame unless we comply with them.

The Smithsonian fund is small in reference to the greatness and prospects of this country; but it is a germ above price. It may be made a foundation in the intellectual career of our country. And here I come to a main purpose of this paper.

If it be asked in what way shall the fund be brought into activity, an answer is at hand. Let it be engrafted upon the National Institute. This is no original proposition of mine. It has been a well-considered opinion. It came first from the venerable Duponceau, and has met the concurrence of so many judgments entitled to respect as now to form what may almost be called an enlightened public opinion. Standing behind such leaders, I only come in with humble but earnest co-operation. I would say, then, clothe this Institute with it; it is now suffering for want of funds—the only want that it knows. It is rich in zeal, rich in character, and already abundantly ripe in experience.

If allowed to touch upon only some of its claims, I would go on to say, that it is an Institute which, through the spontaneous and honorable zeal of its members, and in a space more brief than has passed since the fund has been lying dead, has made advances in scientific and literary usefulness creditable to itself and to the country; an Institute composed of responsible public functionaries intermingling with eminent private individuals, and under this, as other features in its organization, a safe depository of the fund, whilst the practice of its own duties has given assurance that it would administer it with ability; an Institute which has nobly toiled for a name and earned it, loving science for its own sake, and which now sees upon its list, as members or correspondents, distinguished men and learned associations of foreign countries, in addition to those of our own. Confer it, then, I would repeat, upon an Institute thus already recommended in so many cardinal points to the public confidence and favor, and upon which Congress could impose all further conditions and guaranties necessary.

Besides the advantages in taking this Institute as a basis for giving effect to the will, fears start up that the fund may otherwise fall through. Delays produce delays. Long inaction deadens the mind to its duties and energies, or cause it to halt in indecision, or to be distracted by contrariety. An eminent judge, in delivering an opinion from the bench of the Supreme Court of the United States not long ago, remarked, that it had been with him "a subject of deep regret, that, notwithstanding the numerous, consistent, most solemn, and (with some few exceptions) to his mind satisfactory adjudications of that court in expounding the Constitution, its meaning yet remained as unsettled in political, professional, and judicial opinion as it was immediately after its adoption; and that if we were to judge of the next by the results of the past half century, there was but slight assurance that that instrument would be better understood at the expiration than it was at the beginning of the period."

To make the application in no irreverent sense to the constitution—for much might be said to modify the ingenious extract—but under anxious feelings for the Smithsonian fund, if the founding of an entirely new and independent institution is thrown open as a debatable question at this time of day, in its whole compass and details, a long interval may pass before we hear of a final decision. After the procrastination and supineness already experienced, we should too probably see postponed through long years the consummation desired. Let us rather rejoice

that further delay may be prevented by "laying hold," to use the words of the enlightened Duponceau well nigh four years ago, of a trustworthy association already in successful operation, with its business habits established, its official routine approved, and ready to become, under the control of Congress, which can so easily enlarge upon the foundation, the instrument for giving prompt life and value to the precious fund. We may thus at once free ourselves from the disadvantages and reproach of its being longer buried in oblivion.

Further and higher inducements appeal to Congress for taking the subject in hand at once. Our political institutions are dear to us all. In looking to our progress under them, the predominance of blessings in the past justifies the best hopes of the future. But, partaking of the imperfection of human things, let us not forget that one tendency to danger in them is in the too intense and absorbing party passions which they are apt to engender. We are now upon the eve of periodical agitation which a contest for the Chief Magistracy in so great a country must always bring with it, and which, in all probability, is destined to become more and more intense as time goes on. To expect its extinguishment would be idle, even if it were desirable; nevertheless, considerate men seek, in the meliorating influences of letters and science, some counterpoise to the excesses to which this kind of agitation is prone under popular institutions. The "Royal Society" of London, that body whose annual volumes have made such contributions to the stock of knowledge for a century, was founded through the desire formed in a few contemplative minds to retire from the turmoils of political contention, consequent upon the civil wars in England. Happy might it prove, if, under such an analogy, this present Congress would signalize its present session by enabling the National Institute to exert these meliorating influences. By investing it with the Smithsonian fund, and giving it the Smithsonian name, rational hopes might be cherished of creating pursuits at this political centre of our Union, thence to the diffused to its extremities, in the excitements of which salutary diversion might be found from the harsh collisions incident more or less to all political strife. Especially might resources grow up in such an establishment, under the diversified attractions of literature, science, and the arts, which the scope of the will would embrace, for the members of the legislative branch of our Government, annually assembling at Washington, so many of whom would know how to turn them to delightful and profitable pastime. At the battle of Talavera, the English and French armies suspended all conflict to drink at a stream between them, handing the cup from one side to the other. How beautiful, in like manner, if our two great political parties at this metropolis could be seen seeking common refreshment from the intellectual streams which the National Institute would copiously cause to flow from the rich fountain of the Smithsonian bequest!

In conclusion, I must hope to be pardoned for obtruding an item of personality into this paper, but only as it bears on its main purpose.

When in England in 1838, on the interesting errand of procuring this fund, it was my fortunate lot to mix with some of the members of the Royal Society. From them I learned how esteemed and valued a member Mr. Smithson was of their ancient body. From them I received felicitations on obtaining for my country that fortune which he had expended almost exclusively in the cultivation of science; the pursuits of which constituted his passion and his pleasure, for his own sake, and that of his fellow-men every where. From them I heard ardent wishes expressed for the auspicious results of this fortune among us; as consonant to *his*

intentions, and as instigated by feelings in themselves springing from sympathies which make the votaries of science a brotherhood in all nations. May I go a step farther and add, that the last occasion on which it was my grateful privilege to mingle in the atmosphere of that illustrious body, in whose presiding chair have been a Newton and a Davy, where also princes of the blood have been proud to sit, was over the festive board, at one of its accustomed assemblages for purposes merely social. The "feast of reason" was blended with the social flow; and then was manifested especial cordiality for the beneficial use of this munificent legacy in the new sphere of its destination.

If the recollection of such scenes, with many more kindred to them, bearing upon this noble fund while in course of recovery, be insufficient to raise in others anxious wishes for its application, without more delay, as the donor desired and enjoined, I hope that it may go some way towards accounting for their existence in me, and excusing the strong expression of them upon which I have ventured; not stronger, however, than I sincerely believe to be due to sacred considerations of public faith, and to the dearest interests of the human mind.

RICHARD RUSH.

Sydenham, near Philadelphia, March 28, 1841.

CLOSING ADDRESS,

BY THE

HON. JOHN C. SPENCER.

GENTLEMEN: The time has arrived when the friends of science who attended in this city on the invitation of the National Institute, are about to separate from those whom they have so kindly visited. The delightful intercourse of mind, and the exchanges of intelligence, which have been so vigorously maintained for the last week, are now to be suspended—we hope not terminated. Personal acquaintances have been formed, calculated to promote mutual respect and good will, which will guide its future correspondence between gentlemen engaged in kindred pursuits; and it is hoped that all will feel invigorated in their efforts for the promotion and diffusion of science.

In behalf of the committee appointed by the National Institute to arrange the literary and scientific meetings which are now to close, I tender the thanks of that body, and I venture to say the thanks of the gratified audiences who have heard the learned, able, interesting, and valuable papers which have been read, to the gentlemen who have prepared and furnished them. The doubts which hung over the inception of the plan for these meetings have been dissipated, and the ability of our country to exhibit an array of learning, of scientific enterprise, and of talent, in all respects creditable, has been established.

The confidence inspired by such a result will secure for future assemblages of a similar description, a great increase in the attendance of the literary and scientific men of the United States, while those who shall invite and organize them, will be enabled, by the experience they have had, to supply any omissions, and prevent any irregularities that may have attended this first experiment.

We expect not to compete with the learned men of Europe in the exhibition of scientific attainment. We are too well aware of the demands of our new country for what is of immediate, direct, and practical utility—of the want of that leisure which wealth confers, and of those appliances, books, apparatus, museums, galleries, which national munificence and private liberality provide in other countries for the destitute sons of genius. We are too well aware of these and other causes operating to our disadvantage, to challenge comparison with the literary and scientific associations of the Old World. But we know also that to enterprise and perseverance there are no barriers but those which nature itself prescribes; that by mutual conference and combined effort we can strengthen each other's hands, warm each other's hearts, and brighten each other's hopes; and that by patient and modest investigation we may largely increase the stock of American contributions to the world's treasury of useful facts, original inventions, and discoveries of new applications of science to the purposes of civilized life.

In this hope we met; may I not say in this confirmed conviction we separate?

In closing these delightful meetings, and in bidding our guests an affectionate farewell, I would invoke upon our cause, and upon all who engage in it, the blessing of that gracious Being whose works we study, whose goodness we adore, and without whose favor all our labors are vain.

At a subsequent stated meeting of the National Institute, a resolution was passed, requesting the committee, of which Mr. Spencer was chairman, to make a report of the proceedings of the Scientific Convention; and likewise to lay before the Institute all the papers and communications submitted on the occasion, with a view to publication. Whereupon, the chairman made the following report, instructing the Corresponding Secretary, at the same time, to submit all the papers referred to in the resolution:

REPORT.

The committee, originally appointed on the 13th of June, 1842, by the National Institute, in which vacancies were supplied, and to whose number additions were made in February, 1843, and who were charged with the duty of issuing invitations in the name of the Institute, and making all necessary arrangements for a meeting of the learned men of our country, at the seat of Government, Report:

In furtherance of the plan of the Institute, a preliminary circular was issued by the committee, on the 15th of October, 1842, addressed to known literary and scientific gentlemen in different parts of the United States, transmitting a copy of the proceedings of the Institute of the 13th of June, 1842, and inviting a communication of views in relation to the proposed meeting. The sentiment in its favor appeared from the answers received to be so general, that the committee felt themselves justified in naming a day for the assemblage. They selected the first Monday in April, in the year 1844, for that purpose, and issued a circular on the 24th of February, 1843, inviting the members of the learned and scientific societies in the United States, the honorary and corresponding members, friends and patrons of the Institute, and all others engaged in the increase and diffusion of knowledge among men, to meet at the city of Washington, on that day.

On the day appointed, a very respectable meeting was held at the Presbyterian church, on 4½ street, in this city. At the request of the committee, the President of the United States commenced with a brief address, and presided. The Hon. R. J. Walker, a member of the Senate of the United States, from the State of Mississippi, delivered an opening address.

Meetings were held, from day to day, until and including Monday, the 8th day of April, when they were terminated by an address from the chairman of your committee. At these meetings addresses and lectures were delivered and read on various interesting subjects, and usually to very respectable and attentive audiences. They were regularly attended by the Corresponding Secretary of the Institute, Francis Markoe, Jr., Esq., who kept notes of the papers read, and of the addresses delivered.

A large sub-committee was formed, consisting of the most distinguished citizens and residents in Washington, to make the necessary arrangements for the accommodation of the literary and scientific gentlemen who came here, and for the holding of the meetings. By this activity every thing was provided which the occasion demanded, and our guests were highly gratified with their reception and the attentions they received. Nothing but a desire to avoid giving offence, prevents our naming the gentlemen who were most active and useful in this hospitable service.

It may be said, with truth, that as a whole, the exercises of the week realized the hopes of all, and exceeded the expectations of many.

A subscription was obtained from various individuals to defray the expenses of the meetings, and of the publication of the proceedings. The fund is placed in charge of the Corresponding Secretary.

The committee have felt much embarrassment in determining upon the disposition to be made of the essays and papers read. Their publication, or that of some of them, is doubtless expected by those who contributed to the fund for defraying expenses. But they are too numerous and voluminous to be published entire. Some of them are upon subjects foreign to the purposes of the meetings and of the Institute, and for these and other reasons, a selection from them is indispensable.

The engagements of the members of the committee will not permit them to undertake this task of selection, even if they deemed themselves otherwise qualified. They were considering the question whether some scientific gentlemen might not be engaged to read the papers that are or may be left by the authors for publication, and to recommend such as it might be deemed advisable to publish, when the resolution of the Institute of the 10th instant reached them, and happily relieved them of the difficulties of the case. They will, with great pleasure, instruct the Corresponding Secretary of the Institute to bring before you the papers submitted to the committee, and in his hands.

For the committee,

J. C. SPENCER, *Chairman*.

WASHINGTON, *June* 17, 1844.

RESOLUTIONS OF THE NATIONAL INSTITUTE, AUTHORIZING THE PUBLICATION AND DISTRIBUTION OF THE PROCEEDINGS, &c., &c.

The committee having, in compliance with a request of the Society, submitted its report, the same was communicated to the meeting of the 8th of July, by the Corresponding Secretary, who accompanied it by a report, and the correspondence and papers relating to the meeting; whereupon, the following resolutions were offered by the Secretary and adopted:

Resolved, That the report of the committee, and that of the Corresponding Secretary, communicating said report, be adopted.

Resolved, That it is expedient to publish a volume of the proceedings of the meeting of April, 1844, and that for this object the Corresponding Secretary of the Institute be requested to obtain all the papers, addresses, and communications which constituted the exercises of said meeting.

Resolved, That, as soon as all the materials shall be ready for publication, the Vice President appoint a committee of publication, of which he shall be the chairman, whose duty it shall be to examine the materials carefully, to reject all papers it thinks inexpedient to publish, to omit passages it may conceive to be objectionable, and to reduce such as appear to be too long; and also to make a contract for the publication of as many copies of the work as they shall think proper, which, when published, shall be distributed in the following manner:

1st. One copy to every subscriber who has paid, or who shall pay, the sum of five dollars.

2d. One copy to every society and institution in the United States, and foreign countries, in correspondence with the National Institute; one copy to every col-

lege in the United States; and one copy to each member of the present Congress. The remainder to be sold on account of the Institute, and under its directions, with the exception of 500 copies to be reserved for future use.

Resolved, That it is expedient to publish a third bulletin of the proceedings of the National Institute, for which the Corresponding Secretary, under a former resolution of the Institute, has already prepared the principal portion of the materials, and that the third bulletin form a part of the aforementioned volume.

Resolved, That the third bulletin shall consist of the following materials:

1st. Abstract of the proceedings, embracing the correspondence, and a statement of the contributions, donations, and deposites, with the names of the contributors, donors, and depositors, from March, 1842, where the second bulletin terminates, to the present period.

2d. Copies of the two memorials lately presented to Congress on behalf of the Institute.

3d. Charter of Incorporation.

4th. Constitution and By-Laws.

5th. List of Officers, and of honorary, corresponding, paying corresponding, and resident members; and also of societies and institutions, foreign and home, in correspondence with the National Institute.

Resolved, That a prospectus be issued by the committee, announcing the publication of a volume to embrace the proceedings of the April meeting and a third bulletin.

Resolved, That, inasmuch as Congress has adjourned without making any provision for the Institute, it is expedient that new exertions should be made to raise money throughout the United States to sustain it, and to promote its objects; and that, with this view, the Vice President and the constitutional officers be authorized to send an agent or agents to such places as they may select, for the purpose of collecting money to defray the expenses of the publications, and for the general purposes of the Institute, to be expended under the Board of Management.

PETER FORCE, *Vice President*.
FRANCIS MARKOE, Jr., *Corresponding Secretary*.
Committee of Publication.

Washington, *July* 12, 1844.

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10 AUG 1887

FOURTH BULLETIN

OF THE

NATIONAL INSTITUTE

FOR THE

PROMOTION OF SCIENCE,

WASHINGTON, D. C.,

February, 1845, to November, 1846.

WASHINGTON:
PRINTED BY WILLIAM Q. FORCE,
PENN. AVENUE, CORNER 10TH STREET.
1846.

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NOTICE

TO THE MEMBERS

OF THE

NATIONAL INSTITUTE.

A reference to the last "Memorial to Congress," (p. 503,) which was presented to the Senate by the honorable Lewis Cass, and to the House of Representatives by the venerable John Quincy Adams, will afford the members some idea of the present condition of the National Institute. Notwithstanding that renewed appeal, Congress has again omitted to grant relief. More than a thousand boxes, barrels, trunks, &c., &c., embracing collections of value, variety, and rarity in literature, in the arts, and in natural history, remain on hand unopened—the liberal contributions of members at home and abroad—of Governments—of learned and scientific societies and institutions of foreign countries and of our own—and of munificent friends and patrons in every part of the world. The worth, extent, and American interest of these collections may be understood, though imperfectly, by a perusal of the four Bulletins which are now before the public. For the preservation, reception, and display of these, the Institute has neither funds, nor a suitable depository. The usual meetings of the members have been suspended for a considerable period. Hence the regular proceedings have

been interrupted; and, hence, the present volume—(which has been published by the subscription of a few members and others, a subscription so limited as to have rendered it indispensably necessary to abridge the publication within the narrowest possible compass,)—instead of presenting, in the usual form, the *proceedings* of the Institute;—gives a mere and meager abstract of a voluminous and valuable correspondence, and an imperfect account of donations and contributions to its library and cabinet.

WASHINGTON, *November* 25, 1846.

ABSTRACT

OF

COMMUNICATIONS AND PRESENTS

TO THE

NATIONAL INSTITUTE.

Communications, &c.

From Señor Sinibaldo de Mas, Spanish Chargé d'Affaires in China, Macao, May 12, 1844: Submitting his essay on Ideography, &c., to the examination of the Institute.

*From J. C. Pickett, late U. S. minister to Lima, Peru, August 15, 1844: On the fate and character of Major André, &c.

*From the same, Lima, Peru, September 30, 1844. Third letter; on the canal communication between the Atlantic and Pacific oceans.

*From C. C. Rafn, Perpetual Secretary of the Royal Society of Northern Antiquarians, Copenhagen, October 10, 1844: Describing, at large, the Museum of American Antiquities of the Royal Society, &c.

*From J. C. Pickett, late U. S. minister to Lima, Peru, October 20, 1844: On maté, the yerba, or tea of Paraguay, &c.

From the Berlin Society for the Encouragement of Horticulture in Prussia: G. A. Tintelman, Secretary General, Berlin, November 20, 1844.

*From T. G. Clemson, U. S. Chargé d'Affaires in Belgium, Brussels, December 12, 1844: Describing a new loom, invented and patented in Brussels, by C. de Poorter, and recommending its introduction into the United States.

*From Henry A. Wise, American minister, Brazil, Rio Janeiro, January 13, 1845: Describing the Boabab of Senegambia, the Adansonia digitata, a remarkable tree of Africa, &c.

*From John A. Bryan, late Chargé d'Affaires of the United States at Lima, February 14, 1845: On the communication between the Atlantic and Pacific oceans.

*From Rev. John G. Morris, Baltimore, February 15, 1845: Remarks on the natural history and habits of a remarkable larva from New Zealand, having a plant growing out of its head, called by the natives hotté. For further remarks on this subject, see page 506.

From Dr. Joseph Johnson, Charleston, South Carolina, February

*The communications marked thus * have been published in full in the Washington newspapers and elsewhere.

18, 1845: Referring to Captain Aulick, U. S. Navy, for information respecting the fate of the U. S. sloop Wasp, Captain Blakely.

*From G. Voglesang, Austrian consul, New Orleans, March 3, 1845: Observations on the practicability and advantage of introducing a universal system of weights, measures, and coins, among all nations, &c.

From Eugenio Alberi, of Florence, March 6, 1845: Offering to the Institute, by permission of the Grand Duke of Tuscany, a copy of the complete works of Galileo Galilei, recently published from the original manuscripts.

From R. M. Hamilton, U. S. consul, Monte Video, March 8, 1845: Promising that, when peace shall be restored, he will collect for, and forward to, the Institute, a full series of mineral and other specimens of the Banda Oriental.

From Dr. Joseph Johnson, Charleston, South Carolina, March 10, 1845: Biography (MSS.) of Captain Blakely, U. S. Navy, who commanded, and was lost in the U. S. sloop-of-war Wasp, during the last war with England; with a chart giving the supposed route of that ill-fated vessel.

From D. S. Lamme, of Missouri, March 24, 1845: Proposing to sell, to the Institute, the large collection of mastodon, and other fossil bones, &c., from Missouri, now deposited in the great hall of the Patent Office.

*From M. Fialin de Persigny, Paris, March 24, 1845: Giving an abstract of his new theory of the design and uses of the pyramids, &c.

*From Commodore J. D. Elliott, U. S. Navy, April 8, 1845: Correspondence with General Andrew Jackson respecting the Roman sarcophagus, &c.

From A. H. Palmer, American and foreign agency, N. Y., April 15, 1845: Announcing a present from Siam for the Institute.

*From Robert Wickliffe, jr., U. S. Chargé d'Affaires, Sardinia, Turin, April 20, 1845: Historic hints on the origin of the Guelphs and Ghibbelines, &c.

*From J. A. Bryan, late Chargé d'Affaires of the United States at Lima, April 23, 1845: Second letter on the Isthmus of Darien, and Panama, &c.

*From Commodore M. C. Perry, U. S. Navy, April 29, 1845: Giving a list and description of articles of curiosity, &c., brought home by him from the African station.

From S. T. Olney, Secretary of the Providence Franklin Society, Providence, Rhode Island, April 30, 1845: Proposing to exchange plants, &c., with the Institute, &c.

*From William H. Thomas, Washington, May 5, 1845: On the knowledge of the mechanic arts and progress of improvement among the Indians, &c.

*From Stanislaus Hernisz, late attaché of the U. S. Chinese mission, May 6, 1845: On the Chinese language, with illustrations, &c.

From William B. Hodgson, Savannah, Georgia, May 18, 1845:

Offering to publish at his own expense, with illustrations, his paper on the megatherioid fossils of the United States, read at the meeting of April, 1844.

From D. Groux, New York, June 15, 1845: On the subject of his large and valuable cabinet of coins, medals, &c., offered by him for sale to the Institute.

*From Verina S. Moore, Newbern, North Carolina, June 20, 1845: Description of the manner in which one of the bolts to which Columbus was chained when a prisoner at St. Domingo, was procured by the late Purser R. S. Moore, U. S. Navy, in 1844.

*From C. S. Todd, American minister in Russia, July 4, 1845: Describing an undecayed body that was buried one hundred and thirty years ago at Revel, in Russia, &c.

*From C. Edwards Lester, U. S. consul, Genoa, July 29, 1845: On the scientific meetings of Italian savans.

*From J. G. Bruff, Washington, August 12, 1845: Description of the effects of lightning on a house near Washington, by which three persons were destroyed, with an illustrative drawing.

*From Captain J. H. Aulick, U. S. Navy, August 19, 1845: Notice of Mr. Wheelright, an American, who first introduced steam navigation into the Pacific, &c.

From Robert Wilson, Louisiana, August 22, 1845: Describing the silk plant of Louisiana, &c.

*From J. C. Pickett, late U. S. minister to Lima, Peru, August 23, 1845: On the subject of guano of Peru, &c.

From M. G. de Lisboa, Envoy Extraordinary, &c., Brazil, August 24, 1845: Proposing to establish relations of correspondence, &c., between the National Institute, and the Historical and Geographical Institute of Brazil.

*From W. Maxwell Wood, M. D., U. S. Navy, (enclosed in letter from Mr. Pickett,) August 25, 1845: Description of the volcano of Kilauea, or Pele's Den, Sandwich Islands.

From Mr. McGuigan, Philadelphia, August 30, 1845: Proposing to buy the animals sent to the Institute by the Hon. Mr. Wise, U. S. minister in Brazil, or to exchange objects of natural history for them.

From T. W. Bacot, Postmaster, Charleston, September 3, 1845: Announcing that he has a fine rattlesnake, sent for the Institute by Mr. Tharin, and asking how he is to send it on, &c.

*From General Thomas H. Bradley, of Tennessee, September 4, 1845: Correspondence respecting the military coat worn by General Jackson at the battle of New Orleans, and the remarks of N. P. Trist, chief clerk, Department of State, made before the Institute on the occasion of the presentation of the coat by General Bradley, in the name of the citizens of Tennessee.

*From the Rev. George Duffield, Detroit, September 8, 1845: Observations on the mineral region of Lake Superior, &c.

*From Captain Phil. St. George Cooke, first regiment U. S. dragoons, September 9, 1845: Describing the recent expedition to the Rocky Mountains by the dragoons, under Colonel Kearney, and the

objects of natural history, &c., collected during the expedition, for the National Institute.

*From John P. Brown, U. S. Dragoman, Constantinople, September 25, 1845: Describing a series of oriental coins presented by him to the Institute, &c.

*From John A. Bryan, Chagres, September 25, 1845: Third letter on the junction of the Atlantic and Pacific oceans.

*From Dr. Joseph Johnson, Charleston, October 4, 1845: Describing the silk plant reared in South Carolina from seeds sent from Asia Minor, &c.

*From Henry Wheaton, American minister to Prussia, Berlin, October 5, 1845: On the destruction of the liberties of Arragon by Philip II.

From W. Henry Carter, New Orleans, October 20, 1845: Offering to the Institute a Mexican bomb used at the storming of the Alamo, Texas.

From Rev. Thomas S. Savage, Missionary, Cape Palmas, West Africa, October 23, 1845: Announcing that he had sent a box of African shells, and would continue collecting for the Institute, &c.

From the Royal Academy of Sciences, Stockholm, Dr. Svedbohm secretary, November 1, 1845: Transmitting its proceedings, &c.

From G. Sheepmaker, Amsterdam, December 5, 1845: Transmitting list of the shells presented by him to the Institute.

*From A. G. Jewett, American minister in Peru, No. 1, December 16, 1845: No. 1, on the best route and modes of travelling from the United States to the Pacific Ocean, &c.

From G. Sheepmaker, Amsterdam, December 18, 1845: Announcing a donation to the cabinet of the Institute.

From W. S. Stratford, Nautical Almanac Office, London, December 23, 1845: Stating that the British Association had presented a copy of its catalogue of stars to the Institute, &c.

From A. G. Jewett, U. S. Chargé d'Affaires, Peru, No. 2, December 28, 1845: On the best mode of transmitting intelligence from the United States to the Pacific ocean, &c.

*From Alexandre Vattemare, Paris, December 30, 1845: Transmitting letters, enumerating the presents he has on hand for the National Institute, and inquiring how he is to forward them, &c.

From Elie de Beaumont, Paris, December 30, 1845: Presenting a copy of his late work on geology.

From J. Balestier, U. S. consul, Singapore, December 31, 1845: Enclosing bill of lading for a box of curiosities from Siam, &c.

*From William P. Chandler, U. S. consul, Puerto Cabello, February 3, 1846: Describing certain hieroglyphic characters inscribed upon a rock near Puerto Cabello, Venezuela, of which he sends a facsimile sketch, and forwarding a specimen of the rock, and other curiosities, for the National Institute.

*From A. R. Johnson, U. S. Army, Camp Boone, Cherokee country, February 4, 1846: On the causes of, and remedy for, the disease, in the potato, called the potato rot.

From John Jay, Corresponding Secretary of the Historical Society of New York, February 21, 1846: Asking the co-operation of the Institute in an application to Congress to publish a sufficient number of copies of the scientific books of the Exploring Expedition to supply the institutions and societies of the United States, &c.

From Robert Hamilton, U. S. consul, Monte Video, February 21, 1846: Describing the guano of Patagonia, of which he sends a sample to the Institute, &c.

From Alexandre Vattemare, France, February 24, 1846: Enclosing a list of books, &c., for the Institute, which he has sent in a box to the Secretary of the Treasury.

From Frederick A. Davisson, M. D., Loudon county, Virginia, February 25, 1846: Stating that he has sent to the Institute a box of shells and reptiles, &c., of Virginia, &c.

From Hon. Lewis Cass, U. S. Senate, February 28, 1846: Respecting the Memorial of the Institute, which he has presented to the Senate, &c.

From the Association of American Geologists and Naturalists, March 1, 1846: Circular—invitation to the meeting to be held in New York in September, and list of papers to be read before it.

From J. G. Norwood, M. D., Madison, Iowa, March 2, 1846: Description (with plates) of a new fossil fish, from the palæozic rocks of Indiana, by himself and D. D. Owen, M. D., to which they propose to give the name of macropetalychthys rapheidolaris.

From John P. Brown, U. S. Dragoman, Turkey, March 10, 1846: Describing the Kundret Halvasi, or providential sweetmeats, which resembles the manna of the Israelites, and is used as a food in Asia Minor; and presenting a box of it to the Institute.

From Christopher Hughes, late minister of the United States at the Hague, Baltimore, March 18, 1846: Presenting a collection of Irish birds, made at Londonderry by his brother-in-law, the late Col. Samuel Moore, of Baltimore.

From the Historical and Geographical Society of Brazil, by M. F. Lagos, Perpetual Secretary, Rio de Janeiro, March 25, 1846: Presenting the transactions of the society, &c.

From Alexandre Vattemare, Paris, April 15, 1846: Announcing that Louis Philip, King of the French, had presented to the National Institute a splendid copy of the great work on the expedition to Egypt, and mentioning other valuable presents, &c.

From B. S. Buckley, West Dresden, New York, April 28, 1846: Presenting, through the Hon. Mr. Ellsworth, a collection of dried plants, and offering others, and asking for the bulletins of the Institute, &c.

From H. P. Sartwell, Penn Yan, New York, April 30, 1845: Sending, by the Hon. Mr. Ellsworth, a collection of Carices, and catalogue of plants, and asking for the publications of the Institute, &c.

From C. A. Holmboe, Professor of Oriental Languages, Christiania, Norway, May 2, 1846: Transmitting to the Institute, by the hands of M. Lövenskiold, the newly appointed minister of Sweden

and Norway, a bronze medal of the late king, Charles John, in his coronation dress, at Drontheim, struck by the city of Christiania twenty-five years after the event; also, three coins struck by King Oscar, &c.

From M. Auguste Lamare Piquot (Traveling naturalist,) near Prairie du Chien, May 3, 1846: Pointing out a peculiarity in the female of an animal found on the Western prairies by him, and supposed by Dr. Morton, of Philadelphia, to whom the letter was referred, to be the *Geomys Bursarius*.—(See proceedings of the Academy of Sciences of Philadelphia, where the simple facts of the statement are published.)

From Col. B. L. C. Wailes, Washington, Mississippi, May 16, 1846: Inquiring as to the best mode of forwarding a collection he has made for the Institute of fossil basilosaurus, zeuglodon, &c., and minerals, &c.

From D. E. Groux, Philadelphia, June 6, 1846: Transmitting a complete catalogue of his collection of coins and medals, eight thousand two hundred and seventy-two in number, which he offers to the Institute at a low price.

From Joshua Dodge, Washington, June 8, 1846: Offering a present to the Institute, &c.

From Hon. R. B. Taney, Chief Justice U. S., Baltimore, June 15, 1846: Communicating extract of a letter announcing that the French Government intended to transmit several valuable works to the Institute.

From M. Serope M. Alishan, Constantinople, June 17, 1846: Giving a historical account of the Armenian medals presented by him to the Institute.

From E. Lamb & Brother, Boston, August 11, 1846: Respecting a box from Smyrna for the Institute, and another lying in the custom-house.

From Arthur Middleton, of South Carolina, August 16, 1846: Presenting a collection of French books on political economy and war, &c.

From Dr. J. H. Causten, jr., Washington, September 4, 1846: With several works on medical subjects, committed to his care in Europe for the Institute by their authors; recommending certain persons as members of the Institute, &c.

From F. Zantideschi, Venice: Presenting the continuation of the series of his works to the Institute.

From J. L. Bardsley, Manchester, England: Transmitting a work by Mr. Adshead, &c.

From John Joseph Prechtl, Vienna: Presenting his work on the flight of birds, just published, and offering his services, &c.

From Maj. E. G. W. Butler, Louisiana: Sending specimens of wild cherries and cherry stones, referred to in former correspondence, &c.

From George Read, U. S. consul, Malaga, Spain: Transmitting various presents to the Institute, &c.

From Hon. Levi Woodbury, Maine: Contributing ten dollars towards the publication of the fourth bulletin, &c.

From Prof. McCulloh, Baltimore: Enclosing a letter from M. Berzelius, &c.

From H. W. Ellsworth, U. S. Chargé d'Affaires, Sweden: Suggesting exchanges of scientific works, &c., between the National Institute and the Royal Academy of Sciences of Stockholm, and other Swedish societies, &c.

*From A. Vattemare, Paris: Transmitting a descriptive catalogue of books, engravings, statues, medals, maps, &c., presented by ministerial departments, societies, and eminent persons in France, placed in charge of the Hon. Reverdy Johnson, U. S. Senator from Maryland.

*From Dr. J. Johnson: On oceanic currents, &c.

From C. W. Dabney, late U. S. consul Fayal: Stating that he is engaged in collecting a complete suite of the mineralogical and geological specimens of the Azores, for the Institute.

From Lieut. D. Ruggles, U. S. Army, Corpus Christi: Stating that before he was ordered to Texas he had forwarded to the Institute specimens of copper, &c., from Michigan, &c.

*From Charles Saxton: Describing various specimens, minerals, fossils, and objects collected by him in Oregon, &c.

From F. Morand, (for F. J. Grund,) U. S. Consulate, Antwerp, August 12, 1846: Announcing that M. Quetelet, Perpetual Secretary of the Academy of Sciences, at Brussels, had placed in his hands various publications of the Academy, for the National Institute.

From S. J. Thomas, Naval Store-keeper, Boston, October 8, 1846: Apprising Secretary that eleven boxes of objects of natural history, collected during the late cruise of the Frigate Constitution, Captain Percival, for the National Institute, were in store, and would be promptly shipped to Washington.

From John Appleton, Chief Clerk, Navy Department, Washington, October 12, 1846: Mentioning the arrival of the boxes by the Constitution, and stating that the report of J. C. Reinhart, who went out in the frigate, as naturalist, would be communicated to the Institute, with a list of boxes, &c.

Many letters, and communications, on a great diversity of topics, acknowledging letters, and membership, and the publications of the Institute with thanks; applauding and encouraging its objects, offering exchanges, presents, and a variety of suggestions, have been received, viz:

From Don A. Ildefonso Gomez, Brazil.
Alexandre Vattemare, Paris.
Prof. Parker Cleveland, Brunswick, Maine.
Erastus Smith, Hartford, Connecticut.
Michel Tenore, Director, &c., Royal Botanical Garden at Naples.
B. B. Minor, Editor of the Southern Literary Messenger, Richmond, Va.
J. K. Kane, Philadelphia.

From S. Stettinius, Agent railroad depôt, Washington.
J. Carroll Brent, Washington.
J. M. Tucker, Columbus, Mississippi.
Rev. H. Humphreys, President St. John's College, Annapolis, Maryland.
Dr. T. Purrington, Washington.
O. de A. Santangelo, New York.
Josiah Quincy, President Cambridge College, Mass.
Prof. Richard S. McCulloh, Washington.
B. Homans, Washington.
W. Spillman, M. D., Columbus, Mississippi.
Capt. C. Scarpati, brig Maria, of Naples.
E. D. Ingraham, Philadelphia.
J. Mills Brown, Cold Springs, New York.
Mrs. E. P. Buck, Washington.
Hon. Judge L. Woodbury, President National Institute, &c.
Dr. McClery, Washington,
Major S. Cooper, U. S. Army.
J. H. Offley, Washington.
T. B. Greene & Co., Havre.
Wm. Rich, Washington.
S. Wetmore, New York.
Crocker & Warren, New York.
W. C. Berryhill, Augusta, Georgia.
A. Waring, New York.
C. W. Sears, Michigan.
Dr. J. W. Kirk, South Carolina.
Cheston Root, Mobile, Alabama.
John Varden, Washington.
Thomas D. Hailes, parish De Soto, Louisiana.
John A. Cornean, Springfield, Illinois.
Robert Hooper, Boston.
J. K. Townsend, Washington.
Prof. J. P. Espy, Washington.
O. A. Norris, Philadelphia.
Hon. J. R. Donnell, North Carolina.
C. W. Lawrence, collector, New York.
Edward Stubbs, Washington.
Hon. George Bancroft, Secretary of the Navy.
Judge H. W. Collier, Tuscaloosa, Alabama.
J. L. Edwards, Washington.
Hon. W. L. Marcy, Secretary of War.
J. L. Baldwin, New York.
A. D. Bache, Superintendent U. S. coast survey.
S. J. Thomas, Boston.
Charles M. Keller, Washington.
Lieut. Col. Hart, U. S. A., New Orleans.
Capt. S. B. Dusenbery, U. S. A., Baltimore.
W. F. Switzler, Columbia, Missouri.

From Dr. R. Dunglison, Philadelphia.
J. H. Lathrop, President State University, Columbia, Miss.
H. Maxwell, Rosslyn, New York.
E. C. Watmough, Philadelphia.
W. S. Craig, Cagliari, Sardinia.
M. Lerebours, Paris.
Aug. Barre, sculptor, Paris.
M. Dubufe, painter, Paris.
M. Amadée Thierry, Paris.
Baron de Watteville, Paris.
Dr. Blandin, Paris.
M. Fratin, sculptor, Paris.
The Duke Pasquier, Chancellor of France, Paris.
M. de Laurentie, Paris.
M. de Lafarelle, Paris.
M. Flourens, Perpetual Secretary of the Academy of Sciences, Paris.
J. Tod, Secretary Royal Scottish Society of Arts, Edinburgh.
G. Sangiovanne, Professor and Director of the Zoological Museum, Naples.
Prof. Giov. Guarini, Naples.
Lieut. C. H. Davis, U. S. Navy.
H. C. Lombard, M. D., Geneva, Switzerland.
Baron de Reiffenberg, Brussels.
Dr. James Paget, London.
T. P. Teale, Leeds, England.
A. Caldcleugh, Santiago, Chile.
G. A. Hamill, Bedford, Pa.
Hon. R. McClelland, House of Representatives, Washington.
J. Linsley, Principal Secretary of the Horticultural Society, London.
Hon. Desiré Nisard, &c., Paris.
F. Taylor, Washington.
J. Varden, Washington.
Lewis W. Minor, Virginia.
New York Historical Society.
A. H. Palmer, New York.
C. F. Foresti, New York.
Don Pedro de Angelis, Buenos Ayres.
Geological Society of Dublin.
S. M. Burnside, Worcester, Massachusetts.
J. Slocum, of Syracuse, New York.
Thomas Carew Hunt, Her Britannic Majesty's Consul General for the Azores, &c.
M. Flourens, Perpetual Secretary of the Royal Academy of Sciences, Paris, September 22, 1846.
Francis Palackey, Perpetual Secretary of the Royal Bohemian Society of Sciences, Prague, Bohemia.
And many others.

DONATIONS AND CONTRIBUTIONS.

For the Cabinet.

Collection of Seeds of Russian plants from the northern parts of Central Asia, collected chiefly by Dr. Schrenk, travelling in the service of the Emperor.—*From Professor Fischer, Imperial Botanical Garden, St. Petersburg.*

Turkish MSS. and other curious articles, &c.—*From Samuel Hazard, Philadelphia.*

Fruit of the Boabab of Senegambia, Africa, or Adansonia digitata. *From H. A. Wise, American Minister, Brazil.*

Minerals and Geological Specimens from Cape of Good Hope.—*From Isaac Chase, American Consul.*

Vesuvian Minerals.—*From T. Lloyd Halsey.*

Large Sarcophagus, inscribed with hieroglyphics, supposed to have contained the coffin of the Roman Emperor Alexander Severus; procured at Beyroot, in Syria, and brought to the United States in the frigate Constitution.—*From Commodore Jesse D. Elliot, U. S. N.*

Tetraedon cornutum, from Cape May, New Jersey.—*From Hon. S. N. Palmer, Pottsville, Pennsylvania.*

Various articles, as follows, collected by Commodore Perry, while in command of the African Squadron, from which he has lately returned.—*From Commodore M. C. Perry, U. S. N.*

Monkey Bread Fruit, Island of St. Jago, one of the Cape de Verds.

A curious Fish, from the Cape de Verd Islands.

Water Serpent, Island of Martinique, West Indies.

Frog, Island of Martinique, West Indies.

Opossum, Island of Martinique, West Indies.

Native Iron, Western Africa.

Cartridge Box of a celebrated war chief of Western Africa. The charges are filled with loose powder; but that which is purchased from the traders is so weak, that an entire charger full is required, even to load their cast-iron barreled muskets.

A Mask worn by the Grand Devil, whose haunt was on the Cavally river, near Cape Palmas, west coast of Africa.

[Almost every tribe has its Grand Devil, a cunning impostor, known only to the kings, and one or two of the confidential chiefs: he lives apart in some retired place in the forest, called the "Devil's Bush." The natives believe that he holds communion with the evil one, and consequently invoke his influence with his royal patron in their behalf. He rarely shows himself, and then only in the most

hideous disguise In most instances he delivers his reponses, like the ancient oracles, from some concealed place, and they are invariably favorable or otherwise, according to the value of the offering, which must be previously deposited in some designated spot, before he will deign any notice of their inquiry. These offerings are frequently of considerable value.]

Rifle Pistol, made by Salola (or Squirrel) a Cherokee Indian, &c.—*From W. H. Thomas.*

Skin of an Ant Eater, from the river of Plate.—*From C. Gantt, Maryland.*

One of the Bolts to which Columbus was chained in prison at St. Domingo; obtained by Purser R. S. Moore, U. S. Navy, in 1844.—*From V. S. Moore.*

Box of Fossils from the Sivalik Hills, Himelaya Mountains, &c.—*From Captain Proby Cautley, British Army, Bengal.*

Box, containing prepared Fish and other animals, &c.—*From G. G. Fleurot, U. S. Consul, Martinique.*

Portrait (framed) of Wm. Wheelwright.—*From Commodore J. H. Aulick, U. S. Navy.*

Box, containing Auerhan and Auerhenne, (cock and hen,) Tetrao uragallus, of Westphalia.—*From E. Schwendler, U. S. Consul, at Frankfort on the Main.*

Fossils, from Bedford, Pennsylvania, &c.—*From G. A. Hamill.*

The Military Coat worn by General Jackson at the battle of New Orleans.—*From General T. A. Bradley, in the name of a number of citizens of Tennessee.*

Three boxes of Berber Ware.—*From J. F. Mullowny, late American Consul, Tangier.*

Box, containing Ornithorynchus paradoxicus, from Van Dieman's Land.—*From Lt. M. Hunt, U. S. N.*

Quadrupeds and Birds (forty-seven specimens) obtained by Capt. Fremont in Oregon and California.—*From Captain Fremont.*

Box of Oriental Coins, &c.—*From J. P. Brown, Dragoman, U. S. Legation, Constantinople.*

Specimens of Silk Plant reared in Charleston, South Carolina.—Seeds of Melon of Casaba, Asia Minor.—*From Dr. Joseph Johnson.*

Meteorite, fragments, &c., which fell in 1839, in the Bokkeneld, Worcester, Cape of Good Hope.—*From Dr. J. Versfeld, by the hands of Mr. Chase, American Consul, Cape of Good Hope.*

Lock of Hair of General Bolivar; fragment of the Flag of Pizarro, the conqueror of Peru.—*From J. C. Pickett, late U. S. Chargé d'Affaires to Peru.*

Eagle, from Texas.—*From Captain McCall, U. S. Army.*

Box of Birds, Fishes, and other objects of natural history of Mexico.—*From Baron Von Gerolt, Prussian Minister, Washington.*

Hotté, a remarkable insect, found at New Zealand.—*From John B. Williams, Salem, Massachusetts.*

Box of Turkish curiosities.—*From Dr. Boyd Reilly.*

Bottle, Grapes and Guava of South America.—*From Miss M. N. Simmons.*

Bronze Statue (caricature) of M. Fratin, sculptor.—*From*

Box containing Medal of General Lafayette, by M. Gatteaux; ten large Medals, Six Medals, Five Medallions, by M. Gallé.

Collection of Engravings, &c.—*From Alexandre Vattemare.*

Pod, leaf, flower, and silk, of a Silk Plant, with a description of its culture in Louisiana.—*From Robert Wilson, Editor of the Planters' Banner, Franklin, Attakapas, Louisiana.*

Package of specimens from the Gold Mines of Brazil, sent by Dr. Ildefonso Gomez, through H. A. Wise, American Minister in Brazil.

Box, containing specimens of the Tripoli Vegetable Silk and Silk Plant, and seed for distribution.—*From D. S. Macauley, U. S. Consul, Tripoli.*

Box, containing Skin, Horns, &c., of a large Moose Elk.—*From Lt. Thom, U. S. Topographical Engineer Corps.*

Box, containing the following curiosities, collected by Capt. Cooke, U. S. A., during a late expedition to the Rocky Mountains, and described in his letter Sept. 9, 1845.—*From Captain P. St. Geo. Cooke, of the 1st Regiment of Dragoons.*

1. Collection of Dried Flowers and Plants.
2. Collection of Mineralogical specimens, &c.
3. Portion of Stem of Artemesia, six inches in diameter.
4. Horns and Skull of Chamois, or Big Horn, (a small specimen, but weighing eighteen pounds.)
5. Portion of scalp of Buffalo Bull, (a most curious and distinctive specimen.)
6. Horned Frog, (*alive.*)
7. Mammoth Tooth of some extinct animal found in a clay bank on a branch of the Blue River, a tributary of the Kanzas.

Collection of Minerals, Fossils, &c., from the Oregon Territory.—*From Charles Saxton.*

Two boxes, containing valuable Books, Medals, Medallions, Statues, &c., from different branches of the French Government, and eminent men of France.—*Sent by M. Vattemare, Paris, under the care of Hon. Reverdy Johnson, of Baltimore.*

Box, containing Shells from Western Africa.—*From Rev. Thomas Savage, Missionary Cape Palmas, W. Africa.*

Box, containing a very large and valuable framed Picture; subject, View of Constantinople as it was several hundred years ago; author unknown; purchased in Rome, at the sale of Cardinal Fiesche's collections, by Thomas Lloyd Halsey—*From Thomas Lloyd Halsey.*

Two boxes, containing objects of natural history, viz: Plants, Fossils, &c., of the Banda Oriental.—*From R. M. Hamilton, U. S. Consul, Monte Video.*

Vessels of Earthen Ware; Knives, Dart-heads, &c., of itzli, or obsidian, dug up from the ruins of an Indian temple, on the Island of Los Sacrificios, near Vera Cruz, Mexico.—*From Midshipman Wm. Van Wyck, U. S. N.*

Box, containing Birds of Ireland, as enumerated in the following list, procured in Londonderry, for Colonel S. Moore, of Baltimore, in 1845.—*From Christopher Hughes, Esq., late Minister of the United States at the Hague.*

3 brace of Grouse,
1 pair of Magpies,
1 brace of Quails,
1 pair of Starling,
1 " Blackbirds,
1 brace of Woodcock,
1 pair of Curlew,
1 Horse Curlew,
1 Bald Pate,
1 Trout Hawk,
1 Martin Hawk,
1 pair Mountain Blackbirds,
1 " Gold Finches,
1 " Grey Wagtails,
1 " Snow Birds,
1 " Green Plover,
1 " Grey Plover,
1 " Red Shanks,
1 " Blue Felts,
1 " Red Wings,
1 Water Ousel,
1 pair Thrushes,
1 " Chaff Finches,
1 " Black Caps,
1 " Blue Bonnets,
1 " Cock of the North,
1 Wheat Ear,
1 Briar Bunting,
1 brace Jack Snipe,
1 pair White Checkers,
1 " Golden Crested Wren,
1 Moss Cheyrer,
1 Yellow Wagtail,
1 pair Grey Linnets,
1 Water Hen,
1 Oyster Catcher,
1 Yellow Hammer,
1 pair Reed Sparrows,
1 " Robbins,
1 Wader,
1 brace Partridges,
1 Cuckoo,
1 Corn Creak,
1 pair Water Rail,
1 brace Snipe,
1 pair Brown Wrens,
1 " House Sparrows.
1 " Green Linnets,
1 " Moss Greys,
1 " Hedge Sparrows,
1 " Sand Snipe,
1 " Tit Larks,
1 " Sky Larks,
1 " Wood Larks,
1 " White Finches,
1 Red Pole,
1 Siskin,
1 Creeper,
1 White Wren,
1 Chirlan Goldfinch,
1 pair Sand Pipers,
1 Yellow Macaroni,
1 Thistle Cock,
1 pair Marl Bullfinch,
1 " Long Tail Titmouse,
1 " Wood Quest,
1 Barn Door Owl,
1 Long-eared Owl,
1 Sheildrake,
1 pair Blackhead Diver Widgeon,
1 " Goldenheaded Widgeon,
1 Scoup Duck,
1 Teal,
1 Crebe Diver,
1 Redhead Diver Widgeon,
2 Male Pheasants, (Golden.)

127 specimens, prepared, set up, and labelled.

Box, containing objects of natural history and curiosity from Venezuela.—*From W. P. Chandler, U. S. Consul, Puerto Cabello.*

Box, containing a series of the Shells of Holland, (list enclosed.)—*From G. Sheepmaker, Amsterdam.*

Box of curiosities, &c., sent through Mr. Balestier, U. S. Consul, Singapore, and Mr. A. H. Palmer, of New York.—*From His Royal Highness, Prince Momfanoi of Bankok, Siam.*

Box, containing a Bomb, thrown by the Mexicans at the siege of the Alamo, Texas.—*From Lt. W. H. Carter, U. S. Navy.*

Box, containing Kudret Halvasi, or Providential Sweetmeats of Asia Minor.—*From J. P. Brown, Dragoman, Turkey.*

An antique Compass of 1604.—*From H. A. Wise, American Minister in Brazil, in the name of Lt. B. Sheppard, U. S. Navy.*

Two boxes American Birds (with a list).—*From assistant Surgeon Abadie, U. S. A., through Surgeon General Lawson.*

Mastodon Teeth, Ammonite, &c., from the Little Osage river.—*From J. Vaughan, Indian Agent.*

Collection of Seeds, &c.—*From William Prince, Flushing, Long Island.*

Box, containing Guano from Penguin's Island, coast of Patagonia, &c.—*From Robert M. Hamilton, U. S. Consul, Monte Video.*

Box, containing Stalactites from the Cave of Adelsberg, in Carniola, &c.—*From Joshua Dodge.*

Six rare Armenian Coins of the Rupinyan Kings, between the eleventh and thirteenth centuries.—*From S. M. Alishan, of Constantinople.*

Box, containing Cotton of Corrientes, Argentine Confederation, as picked from the trees.—Napkin, &c., formed of the cotton, &c.—Implements used in carding, spinning, &c.—*From Joseph Graham, U. S. Consul, Buenos Ayres.*

Package of Dried Plants, &c.—*From S. B. Buckley, West Dresden, New York.*

Package, containing Carices from vicinity of Seneca, &c.; catalogue of Plants, &c.—*From H. P. Sartwell, Penn Yan, N. York.*

Wild Cherries (a bottle) and Cherry Stones, grown in Louisiana, and taken originally from Mount Vernon, having changed their nature by transplanting.—*From Major E. G. W. Butler, of Louisiana.*

Two boxes, containing Minerals, Ores, &c., of Spain; Corals from the Mediterranean, and specimens of ancient Moorish Pottery, &c. *From Geo. Read, U. S. Consul, Malaga.*

Japanese Dwelling-house (model.)—*From R. P. De Silver.*

Box containing Minerals, Geological Specimens, &c.—*From*

Medal of Charles John, of Norway; three Coins of King Oscar, of Sweden.—*From Professor C. A. Holmboe, Norway.*

Copper Coin, Geo. III, 1773, Virginia.—*From Edward Stubbs.*

A collection of Seeds of various species of Russian plants; interesting as ornamental plants, or in a scientific point of view.—*From Professsor F. E. L. Fischer, of the Imperial Botanic Garden, St. Petersburg.*

DONATIONS AND CONTRIBUTIONS.

For the Library.

Transactions of the Royal Bohemian Society of Sciences, 2 vols., last series.—*From the Society, by the hands of Francis Palacky, Perpetual Secretary.*

Memoirs of the Royal Society of Northern Antiquarians, 1842, 1843.—Memoirs; Discovery of America in the tenth century, and several other vols.—*From C. C. Rafn, Perpetual Secretary, Royal Society of Northern Antiquaries.*

Memoire sur Ideographie, par D. Sinibaldo de Mas, Chargé d'Affaires of Spain in China, Macao, 1844.—Vocabulaire Ideographique, (by the same.)—Vocabulaire Ideographique-Francais, Francois-Ideographique, (by the same.)—*From the Author.*

Descripcion de la Nueva Provincia de Otuqués, en Bolivia; Buenos Ayres, 1843.—Historical Sketch of Pepy's Island, in the South Pacific Ocean, Buenos Ayres, 1842.—*From the author, Pedro de Angelis.*

Nieuwe Werken, &c.; New Works of the Society of Netherlands Literature, Leyden, vol. 6.—*From the Society, by J. T. Bodel Nyenheus, Secretary.*

Transactions (late vols.) of the Berlin Society for the Encouragement of Horticulture in Prussia.—*From the Society, by G. A. Tintelmann, Secretary.*

Transactions of the Royal Scottish Society of Arts, vol. 2, part 4, Edinburg, 1844.—*From the Society, J. Tod, Secretary.*

Observations on the practicability of introducing an universal system of Weights, Measures, and Coins, among all nations, by G. Vogelsang, Austrian Consul, New Orleans.—*From the Author.*

De la Destination et de l'Utilite Permanente des Pyramides d'Egypte et de Nubie contre les Irruptions Sablonneuses du Désert, &c., par M. Fialin de Persigny; Paris, 1845.—*From the Author.*

Map of China (in Chinese) large.—Chinese State Papers.—Christomathy.—Red Book, (Chinese) 6 vols.—National Register, &c., (Chinese.)—Various curiosities.—*From Commodore Lawrence Kearney, U. S. N.*

Dictionnaire de Belgique, &c.—Dictionnaire des Hommes des Lettres, &c.—*From Phil. Vandermaelen, founder of the geographical establishment at Brussels, Belgium.*

D'Aquino delle Delizie Tarentine, verzione del Signor Filippo de Jorio da Paterno; Napoli, 1831—Elogio Storico-Critico dell'abate Marciano di Leo, &c.; Napoli, 1833, by the same.—Sul Circondario di Paterno, Memoria Fisico-Economica; Napoli, 1835, by the same.—Della Coltivazione delle Cereali, &c., Regno di Napoli, by the same: and other works.—*From the Author.*

Collection of Historical Documents relating to North Carolina.—1. Documents relating to the "Mechlenberg (N. C.) Declaration of Independence," 1775.—2. Journal of the Provincial Congress of North Carolina, 1776.—3. North Carolina University Magazine, No. 1, containing two historical articles.—4. Indexes to documents relative to North Carolina during its colonial existence, now on file in the offices of the Board of Trade and State paper offices in London; transmitted by Mr. Gallatin in 1827.—Proceedings of the "Safety Committee," of the town of Wilmington, 1774, 1776.—5. Bishop Ives' Introductory Address, &c., Historical Society.—6. Hon. Judge Murphy's Address, &c., History of Literature in the State of North Carolina.—*From Professor C. M. F. Deems, Chapel Hill University, North Carolina.*

Corsi di Osservazioni Meteorologiche nella Zona Torrida, &c.; Naples, 1844.—Relazione di una Gita in Catanea e all'Etna, &c., 1843.—Discorso de G. Ceva Grinaldi, &c.—*From Sig. Monticelli, Perpetual Secretary, Academy of Sciences, Naples.*

Manual, &c., respecting growth, &c., of the Mulberry, and culture of Silk, &c., by J. H. Cobb, A. M..—Treatise on Mulberry Tree and Silk, &c., with engravings, by J. Clarke, Superintendent Morodendron Silk Company, Philadelphia.—Journal American Silk Society, &c.—*From J. F. Callan.*

Transactions of Society for Encouragement of Arts, &c.; London, 1845, vol. 55.—*From F. Taylor.*

Thesé pour le Doctorat en Medecine, &c., par J. V. Bodinier, &c.—*From the Author.*

Drawing of Pennington's Steam Balloon, &c.—*From J. H. Pennington.*

Box, containing twenty-five volumes on Natural History.—*From D. B. Warden, Paris.*

Histoire Primitive des Races Océaniennes et Americaines, par Gustave d'Eichthal; Paris, 1845.—*From the Author.*

Several Pamphlets, London.—*From the Hon. Mr. Joseph Hume, M. P.*

Box of Books, large collection, embracing works of great value and rarity, and many of them superbly illustrated.—*From A. Vattemare, Paris.*

Annuaire Magnetique, &c., 3 vols., quarto, Russia.—*From Major General Tscheffkine, &c.*

Transactions of the Society for the encouragement of Arts, Manufactures, and Commerce; London; 54 vols., 8vo., from 1783 to 1844.—*From the Society.*

Ephemerides Astronomicas, calculadas para o Meridiano do Observatorio da Universidade de Coimbra, para o anno de 1846.—The same, for the year 1847.—*From the Commander J. C. de Figanière e Morão, Minister of Portugal, Washington.*

Glory and Shame of England, &c., 2 vols.—Condition and Fate of

England, 2 vols.—Medici Series of Italian Prose.—Artist, Merchant, and Statesman, &c., embracing the works of C. Edwards Lester.—*From the Author, &c.*

Royal Gazette, &c., Bermuda, containing Meteorological Tables, to September, 1846.—*From his Excellency Mr. Reid, Governor.*

Observations made at the Magnetical and Meteorological Observatory at Toronto, Canada, quarto, 1st vol., 1840, 1841, 1842; printed 1845.—*Presented by direction of the British Government.*

Proceedings connected with the Magnetic and Meteorological Conference held at Cambridge, in June, 1845, during the Meeting of the British Association.—*From the same, by the hands of the Hon. E. Everett, Envoy Extraordinary and Minister Plenipotentiary of the United States, London.*

Transactions of the Royal Scottish Society of Arts, Edinburg.—*From the Society, by the hands of James Tod, Secretary.*

Report on the Standard of Weight and Measure for the State of Maryland, and on the Yard measure, by J. H. Alexander.—*From the Author.*

Papers on Practical Engineering, No. 3.—*From Col. J. G. Totten, Chief Engineer Corps, U. S.*

Work in Polish, by K. B. Stolzmann.—*From the Author, by the hands of M. Kallussowski.*

Guida dell' Educatore e Letture per la Gioventu Compilati da R. Lambruschini, &c., &c., 1844, 6 vols.—Atti dei Georgofili di Firenze e Giornale Agrario Toscano; Firenze, 1843, 1844, 8 vols.—Le Opere de Galileo Galilei, prima edizione completa, condotta sugli autagraphi manoscritti palatini, e dedicata A. S. A. J. e R. Leopoldo II, Granduca di Toscana, Programma; Firenze, 1845, by Eugenio Alberi.—Riporta di E. Alberi, &c.; Marsilia, 1844.—Brevis Disquisitio Eugeni Alberié, &c., de Galileo Galilei, &c.—*From C. Edwards Lester, U. S. Consul, Genoa.*

Bulletin de l'Academie Royale des Sciences et Belles Lettres de Bruxelles, octavo, 1843, 1844, 12 vols.—Annuaire de l'Academie, &c., 1844.—Annales de l'Observatorie Royale, quarto, tome 3, 1844.—Memoires Couronnés et Memoires des Savants Etrangers, &c., Bruxelles, 1844, quarto.—Observations des Phenomenes Periodiques, par A. Quetelet, &c.—Recherches Statistiques, 1844, by A. Quetelet, Astronomer Royal, and Perpetual Secretary of the Academy of Sciences, Brussels.—*From M. Quetelet.*

Various Works of J. Grœberg di Hemsó, 7 vols.—*From the Author, by the hands of C. Edwards Lester, Florence.*

Various Works of Baron de Reiffenberg, Brussels, 1845.—*From the Author.*

Manuscript Koran, handsomely bound.—*From J. F. Mullowny, late U. S. Consul for Morocco.*

Religious Book in German, published in Pennsylvania, 1762.—*From Lt. W. D. Porter, U. S. Navy.*

Transactions of the Zoological Society of London, 1843, 1844, 1845.—*From the Society.*

Trattato del Magnetismo e della Elettricita, dell'Ab. Francesco Zantedeschi; Venice, 1844, part 1, two copies.—Several other works, by the same.—*From the Author.*

Metier de Poorter, &c., Bruxelles, 1844.—Copy of Report of Chamber of Commerce, Brussels, on Mr. de Poorter's Weaving Loom.—*From T. G. Clemson, U. S. Chargé d'Affaires, Belgium.*

Memoire sur la Famille des Primulacées, par M. J. E. Duby, &c., Genève, 1844.—*From the Author.*

Annual Report of the Regents of the University of New York, 1845.—*From the University.*

First Annual Report on the Geology of Vermont, 1845.—*From C. B. Adams, State Geologist.*

Southern Literary Messenger, April, 1845, Richmond, Va.—*From B. B. Minor, Editor.*

Report of Chemical Analysis of Sugars, Molasses, &c., by Professor R. S. McCulloh, 1845, &c.—*From the Author.*

Schoolcraft's Report on Aboriginal Names and Geographical Terminology of the State of New York, 1845.—*From the Committee of New York Historical Society.*

Proceedings of the Boston Society of Natural History, May 17, 1843, to November, 1845.—*From the Society.*

Proceedings of the Academy of Natural Sciences of Philadelphia, January, 1845, to October, 1845.—*From the Academy.*

Proceedings of the American Philosophical Society, Philadelphia, from January to August, 1845.—*From the Society.*

A great variety of Pamphlets, Documents, Circulars, Papers, &c.—*From Authors, Editors, &c.*

Map of New York Bay and Harbor, &c., U. S. Coast Survey.—*From A. D. Bache, Superintendent U. S. Coast Survey.*

New System of Stenography, by C. Saxton, 1843.—*From the Author.*

Collection of Public Documents relating to affairs of Buenos Ayres and the English and French Missions, 1845.—*From Don Pedro de Angelis, Buenos Ayres.*

Verhandlungen der Kaiserlich-Russischen Mineralogischen Geselischaft, zu St. Petersburg, 1843.—The same, 1844.—*From the Imperial Mineralogical Society of St. Petersburg, by the hands of Charles Cramer.*

Transactions of Royal Academy of Sciences; Stockholm, 1844, 1845.—*From the Society.*

Proceedings of the Franklin Society of Providence, Rhode Island, vol. 1, No. 1, 1846.—*From the Society.*

Pamphlets, &c., &c.—*From Robert Lawrence, New York.*

On Hernia, by T. P. Teale, F. Z. S., M. D., &c., London.—*From the Author.*

Four packages of Books, &c., &c.—*From A. Vattemare.*

Revista Trimensal de Historica e Geographica, or Journal of the Historical and Geographical Institute of Brazil, from 1839 to 1846, 26 vols., octavo.—Memorias de Instituto Historico, &c.—Da Vida e Feitos de A. de Gusmã, &c.—As primeiras Negociações Diplomaticas Respectivas aõ Brazil, &c.—*From the Institute of Brazil, by the hands of his Excellency Mr. Lisboa, Envoy Extraordinary and Minister Plenipotentiary of Brazil, at Washington.*

Correspondencia, &c.; Diplomatic Correspondence with France and England, 1846, quarto; Buenos Ayres.—*From Don Pedro de Angelis.*

Proceedings of Academy of Natural Sciences of Philadelphia, to April, 1846.—*From the Academy.*

Memoirs of the Administrations of Washington and John Adams, edited from the papers of Oliver Wolcott, Secretary of the Treasury, by George Gibbs, 2 vols., octavo; New York, 1846.—*From the Editor.*

Lithographic Portrait of the Abbé General of the Mekitarists of Venice.—*From M. Alishan.*

Transactions of the New York State Agricultural Society, 1845.—*From Robert Lawrence.*

Annals of the Lyceum of Natural History of New York, vol. 4, No. 5; February, 1846.—*From the Lyceum.*

Box (large) containing a collection of French works on Political Economy and War, &c.—*From Arthur Middleton, of South Carolina.*

Works (4 vols.) of Francesco Zautideschi, of Venice.—*From the Author.*

Prisons and Prisoners, by Mr. Joseph Adshead, 1 vol., octavo; London, 1845.—*From the Author.*

Flight of Birds, &c., (in German,) octavo; Vienna, 1846.—*From Joh. Jos. Prechtl, of Vienna.*

Registration of Births, Deaths, Marriages, &c., of Massachusetts, 1845, by J. G. Palfrey.—Report of Census of Boston, &c., by L. Shattuck.—*From Mr. Shattuck.*

Discourse on the Life and Character of Sir Walter Raleigh, delivered by J. Morrison Harris, before the Maryland Historical Society, May, 1846.—*From the Historical Society.*

The Eneis, &c., in English blank iambic, &c., by J. Henry, M. D.; London, 1845.—*From the Author.*

Observations sur le Voyage au Darfour, suivie d'un Vocabulaire de la Langue des Habitans, &c., par M. Jomard, Paris, 1845.—*From*

Rivista trimensal de Historia e Geographica, au Jornal do Instituto Historico e Geographico Brazileiro, &c.; Rio Janeiro, tome 1, No. 1, 1846.—*From H. A. Wise, American Minister, Brazil.*

Brief Memoir, explanatory of a new trace of a front of fortification, in place of the present bastioned front, by W. H. Chase, Major Topographical Engineers; New Orleans, 1846.—*From*

Meteorological, &c., Tables, &c.—*From Governor Reid, of Bermuda.*

Physiological Essay on the Thymus Gland, by Jno. Simon, F. R. S., London, 1845, quarto.—Comparative Anatomy of the Thyroid Gland, by the same, 1844, quarto.—*From the Author.*

Jardin de St. Petersbourg, 1846.—Sertum Petropolitanum, seu Icones et Descriptiones Plantarum, quæ in horto botanico Imperiali Petropolitano, floruerunt, 1846—Auctoribus F. E. L. Fischer et C. A. Meyer, folio, (to be transmitted as published.)—*From Professor Fischer.*

Annals of the Lyceum of Natural History of New York, vol. IV, Nos. 6, 7.—*From the Lyceum.*

Two packages, containing books and seeds.—*From the Imperial Botanical Society of St. Petersburg, Professor Fischer, by the hands of J. Slocum, of Syracuse, New York.*

MEMORIAL TO CONGRESS.

The following appeal was made to Congress, at its late session, (1st session of 29th Congress,) in favor of the National Institute, and was presented to the Senate by the Hon. Lewis Cass, and to the House of Representatives by the Hon. John Quincy Adams.

To the Senate and House of Representatives in Congress assembled:

The undersigned would respectfully petition that the memorials* heretofore presented to your honorable bodies in behalf of the National Institute may again be taken into consideration, and the prayers therein be granted.

In addition to the reasons before set forth in their favor, the undersigned would beg leave to state, what they most sincerely deplore—the increasing difficulties of the Institute. It is becoming entirely impracticable, by mere private contributions and taxes, to pay the large incidental expenses attendant on the collection and preservation of so much valuable property connected with the advancement of science, literature, and the arts. The Institute asks, and has asked, nothing for the private emolument of its members; it merely seeks means to secure the property coming into its custody from time to time, so that it may not be injured or lost, and so that it may be exhibited and used by the public, as it is dedicated to the public, and the title to it is intended to be in the Government.

For want of pecuniary means, all our collections, whether in possession or increasing by new additions weekly, are in jeopardy; and unless Congress interfere to save what is so public in its character, and so peculiarly under its guardianship as is the encouragement of matters of this kind within this District, subject to its exclusive legislation, the prospect is that the operations of the Institute must of necessity cease, and the property be abandoned.

Deprecating, as we do, an event so unfortunate for the cause of science and the arts, not only here, but from here, in some degree, over the whole Union, and not a little disreputable to our character abroad, the undersigned would earnestly pray that Congress, at an early day, may avert the calamity by taking steps to aid efficiently in preserving this important public property; and the more especially do we ask this, when, for various reasons, it can be done at moderate expense, and in entire conformity to the provisions of the constitution.

The undersigned respectfully refer to the documents annexed, which exhibit the character of the Institute, and the course of its proceedings.

LEVI WOODBURY, *President.*
PETER FORCE, *Vice President.*

FRANCIS MARKOE, Jr., *Corresponding Secretary.*
G. W. RIGGS, Jr., *Treasurer.*

DIRECTORS.

ROBERT J. WALKER, *Secretary of the Treasury.*
J. J. ABERT, *Topographical Engineers.*
J. G. TOTTEN, *Engineer Corps.*
M. F. MAURY, *U. S. Navy.*
A. O. DAYTON, *Fourth Auditor.*

WASHINGTON, *December* 16, 1845.

List of Documents accompanying the above Memorial.

First Bulletin of the proceedings of the National Institution for the Promotion of Science, established at Washington, 1840: Washington, 1841.

Second Bulletin, &c., March, 1841, to February, 1842: Washington, 1842.

Third Bulletin, &c., February, 1842, to February, 1845; also, proceedings of the meeting of April, 1844: Washington, 1845.

*Copies of these memorials will be found at pp. 383 and 386 of the third Bulletin of the proceedings of the National Institute, which accompanies this memorial.

CORRESPONDENCE BETWEEN MR. McLANE AND SIR H. T. DE LA BECHE, DIRECTOR OF THE GEOLOGICAL SURVEY OF GREAT BRITAIN AND IRELAND,

On the subject of presenting to the National Institute at Washington, from the British Government, the Maps, Sections, and Memoirs of the Geological Survey of Great Britain.

GEOLOGICAL SURVEY OFFICE, CRAIG'S COURT, CHARING CROSS, *May* 18, 1846.

SIR: Having been instructed to present, on the part of her majesty's Government, copies of the maps, sections, and memoirs of the geological survey of Great Britain and Ireland, which have been and will hereafter be published, to one of the chief libraries of the United States; being desirous that these works may be most conveniently deposited for consultation by scientific men, and feeling that your Excellency would be interested in having these Government publications properly placed for this purpose, probably your Excellency would inform me if some chief library or institution in New York, viewing the situation and magnitude of that city, would not be a proper place of deposit for the maps, sections, and memoirs of the geological survey of Great Britain and Ireland.

I have the honor to be, sir, your Excellency's very obedient servant,

H. T. DE LA BECHE, *Director General.*

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38 HARLEY STREET, *May* 21, 1846.

SIR: I regret that, in consequence of rather a severe indisposition, I have been prevented from earlier acknowledging your letter of the 18th instant.

Certainly I should feel much interested in having the important works you are about liberally to present to one of the chief libraries of the United States so placed that the beneficial object of the present might be most effectually promoted; and I would suggest the National Institute, at Washington, as a more appropriate place of deposit for these publications than one of the libraries of any one of our other cities.

The National Institute comprehends within its list of members most, if not all, of the scientific men of the United States; its correspondence is very extensive, and besides the frequency of its meetings, other occasions of general resort to Washington are annually becoming more numerous. It enjoys the patronage of the most eminent men in our country, and its library has already become quite extensive.

I ought, perhaps, to add that I am an honorary and corresponding member of the Institute, and that it will afford me much pleasure to give any aid in my power towards the accomplishment of the object with which you are entrusted.

I have the honor to be, sir, your obedient servant,

LOUIS McLANE.

To Sir H. T. DE LA BECHE, *&c., &c., &c.*

GEOLOGICAL SURVEY OFFICE, *May* 23, 1846.

SIR: I have the honor to acknowledge the receipt of your Excellency's letter of the 21st instant, and in reply, to state that, in consequence of the suggestions and observations contained in it, the maps, sections, and memoirs of the geological survey of Great Britain and Ireland will be presented to the National Institute, at Washington.

As your Excellency has expressed a desire to forward the object with which I am entrusted, might I ask if it would be agreeable to you that the maps and sections now ready should be transmitted to the National Institute, at Washington, through

you, the copies for the Academy of Sciences, of Berlin, having been forwarded by his Excellency the Prussian ambassador, and those for the Imperial Mining Establishment, of Vienna, through his Excellency the Austrian ambassador.

I have the honor to be, sir, your Excellency's very obedient servant,

H. T. DE LA BECHE.

His Excellency LOUIS MCLANE, &c., &c.

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38 HARLEY STREET, *May* 25, 1846.

SIR: I beg leave to state, in reply to your letter of the 23d instant, that it will afford me great pleasure to take charge of and transmit to their appropriate destination such maps and sections and memoirs of the geological survey of Great Britain and Ireland as you may be pleased at any time to present to the National Institute at Washington.

I have the honor to be, sir, your most obedient servant,

LOUIS MCLANE.

Sir H. T. DE LA BECHE, &c, &c. &c.

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GEOLOGICAL SURVEY OFFICE, *June* 4, 1846.

SIR: I have the honor herewith to transmit the official communication to the President of the National Institute, of Washington, respecting the maps and sections of the geological survey of Great Britain, presented, on the part of her majesty's Government, to that establishment, a copy of which I also forward to your Excellency.

As the case containing the maps and sections is somewhat large, I have not forwarded it to your Excellency's residence, but await your wishes respecting the manner in which it should be forwarded to Washington.

I have the honor to be, sir, your Excellency's most obedient servant,

H. T. DE LA BECHE.

His Excellency LOUIS MCLANE, &c., &c., &c.

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From Sir H. T. de la Beche.

GEOLOGICAL SURVEY OF GREAT BRITAIN AND IRELAND,
LONDON, *June* 4, 1846.

SIR: I am directed by the Chief Commissioner of Woods, Works, and Land Revenues to present to the National Institute, of Washington, on the part of her Britannic Majesty's Government, the maps and sections of the geological survey of Great Britain enumerated in the accompanying list.

And I am further instructed to state that all the maps, sections, and memoirs of the geological survey of Great Britain and Ireland will be forwarded to the National Institute, of Washington, for its acceptance, as they become ready for publication.

I have the honor to be, sir, your very obedient servant,

H. T. DE LA BECHE, *Director General.*

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List of Maps and Sections of the Geological Survey of Great Britain, herewith transmitted to the National Institute, of Washington.

25 sheets of maps.
17 horizontal sections.
15 vertical sections.
1 index sheet of colors.

TRENHAM REEKS, *Secretary.*

THE HOTTE, OF NEW ZEALAND.*

The following is an extract from a letter of the Rev. John G. Morris, D. D., of Baltimore, on the subject of a very remarkable insect or *larva :*

"This animal, it is said, travels up both the *rata* and *perriri* trees, and entering into the top, eats its way, perforating the trunk of the tree, until it reaches the root. It then comes out of the root and dies, or lies dormant, and the plant propagates out of its head; the body remains perfect and entire, of a harder substance than when alive. From this insect the natives of New Zealand make a coloring for tattooing."

The following are the remarks of Dr. Morris upon the subject, which probably contain the true account of the habits of this remarkable insect, and all that is at present known in regard to it. He says:

"This animal feeds upon the sweet potato, (*convolvulus batatus*,) and is often found, when *dead*, with a parasitic plant (*Sphæria Robertsi*) growing out of its head. You will see a figure of the larva and the plant in Hooker's *Icones Plantarum*, vol. 1, tab. 2, where the plant is more specifically described. Hooker says 'the plant is not uncommon in New Zealand, always growing on the dead larva of a caterpillar.' The question is, why is the seed deposited always on the head? Does the plant begin to grow before the animal dies, and does its growth kill the larva; or is it only after death that it forms an animal *soil* for the production of this extraordinary parasite? The account of the habits of this insect which you have received, and caused to be exhibited with the specimens in your collection, is altogether fabulous.

"I should have stated before that it is the caterpillar of a butterfly that is subject to this strange *capital* accompaniment. The butterfly is unknown to me, and until some intelligent entomologist visits that country, and makes proper observations, we must be content with the imperfect knowledge we have. In one of my works I have a figure of a small plant growing out of the body of a perfect fly, (*musca vegetans*,) said to occur in Havana, but the story is not authentic, and is open to doubt. I regret that my investigations have not led to a more satisfactory result."

The following letter from Consul Williams, on the same subject, has lately been received:

AUCKLAND, NEW ZEALAND, *October* 30, 1845.

DEAR SIR: Having on a former occasion sent you a concise account of the Hotté, I now take great pleasure in herewith enclosing a number of the Hotté, bulrush caterpillar. This singular plant, which is a native of New Zealand, may be classed among the most remarkable productions of the vegetable kingdom, making the body of an insect—and that too, very probably, a living one—the foundation from which it bears its stem, and the source from which it derives its support. It certainly forms one of the most surprising links between the animal and vegetable kingdom yet noticed, and as such, merits as circumstantial a description as the personal imperfect acquaintance with it will allow. It is only found at the foot of a particular tree, the "rata," the female pohutakawa, which, in every instance, exactly fills the body of the caterpillar, in the finest specimens attains a length of three inches and a half; and the stem which germinates from this metamorphosed body of the caterpillar is from six to ten inches high; its apex fructification resembles the club-headed bulrush in miniature, and when examined with a powerful glass, presents a wonderful appearance. There are no leaves—a solitary stem comprises the whole plant. If broken off, a second stem arises from the same spot. The body is not only always found buried, but the greater portion of the stalk as well, the seed vessel alone being above ground; and when the plant has attained its maturity it soon dies away. These curious plants are far from being uncommon in this country; the natives eat them when fresh, and likewise

* See pp. 483, 493.

use them, when burnt, as coloring matter for their tattooing, rubbing the powder into the wounds, in which state they are said to have a strong animal smell. When newly dug up, the caterpillar is soft; and when divided, the intestinal canal is distinctly seen. Most specimens possess the less entire, with the horny part of the head and claws. The vegetating process is said invariably to proceed from the nape of the neck, from which it may be inferred that the insect, in crawling to the place where it inhumes itself prior to its metamorphosis, whilst burrowing in the light vegetable soil, gets some of the minute seed of this fungus between the scales of its neck, from which, in its sickening state, it is unable to free itself, and consequently, being nourished by the warmth and moisture of the insect's body, then lying in a motionless state, vegetates, and not only impedes the process of change, but likewise occasions the death of the insect. That the vegetating process, then, commences during the life of the insect, appears certain, from the fact of the caterpillar, when converted into a plant, always preserving its perfect form; in no one instance, it is said, has decomposition appeared to have commenced, or any part to have contracted or expanded beyond its natural size. It has been observed that a plant of a similar kind has been discovered growing in abundance on the banks of the Murimbdge, New South Wales, in a rich, black, alluvial soil. Both are cryptogamous plants.

It is a curious step in nature when the insect, instead of rising to the higher order of the butterfly, and soaring to the skies, sinks into a plant and remains attached to the soil in which it buried itself.

I am, very respectfully, sir, your most obedient servant,

JOHN B. WILLIAMS, *Consul U. S. A.*

FRANCIS MARKOE, Jr., Esq.,
Corresponding Secretary National Institute, Washington.

LETTER FROM HON. HENRY A. WISE, AMERICAN MINISTER IN BRAZIL, PRESENTING AN ANTIQUE COMPASS, MANUFACTURED IN 1604, WITH A DESCRIPTION.

LEGATION OF THE UNITED STATES, RIO DE JANEIRO,
February 2, 1846.

MY DEAR SIR: I send you, by the hands of Passed Midshipman Warrington, an antique instrument of science, for the National Institute.

The accompanying correspondence with Lieut. B. Shepard, of the United States frigate Raritan, will describe it.

Very respectfully and truly yours,

HENRY A. WISE.

To F. MARKOE, JR., Esq.,
Corresponding Secretary of the National Institute, Washington, D. C.

U. S. SHIP RARITAN, RIO DE JANEIRO, *January* 30, 1846.

MY DEAR SIR: I send ashore, to be forwarded to you by Mr. Garrett, *the* compass. If there is any merit in its having marked the magnetic poles through all their variations for two hundred and forty-two years, then it may claim some; for that the date (1604) borne on it is genuine, scarcely admits of a doubt.

The idea that so complicated an affair, with quite an almanac inscribed on its plates, evidently calculated for "time long, long ago," would be constructed for deceptive speculation, and sold for twenty-two milrees—the amount I obtained it for—appears to me absurd. Besides, it shows such true signs of age as, I think, would defy imitation in recent manufacture. I have no doubt there may be other compasses of more ancient date, but I believe it would be difficult to find one more unique in its construction.

Professor Ward has been so kind as to examine it, and the result of his decipherings I enclose—though he thinks, for want of leisure, he has been able to do but partial justice to its configurations. For my own part, I have not had the time to examine it with attention.

If you consider it sufficiently curious to render it worthy of preservation, you are at liberty to dispose of it as you may think best calculated to achieve that end. I only have the favor to ask, in case you should send it to the National Institute, that my name may appear in the matter with as little conspicuousness as possible.

If I can make it convenient to ride out and see you before I leave, I will do so; if not, in departing from the Brazils I shall leave behind me my sincere wishes for your own and your family's happiness.

I remain, very truly, your most obedient servant,

B. SHEPARD.

Hon. HENRY A. WISE.

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Description of the Almanac.

Top.—The lines on the centre brass circle show the aspects which the moon makes during a revolution round the earth: namely, sextile, or 60° ✱; a square or quadrate, 90° □; a trine, 120° ◿.

The first and third lines on the steel circle I cannot make out. The middle circle on the steel shows the age of the moon. The use of the seventeen points, or prongs, not known. The next circle contains the names of the months and days. The outer circle contains the lunar epact, or the excess of the solar above the lunar year.

The reverse.—The first and second circles from the centre show the Dominical or Sunday letter. The third shows the golden number from C to 19, as after a period of nineteen years the moon returns to the same place she was nineteen years ago, and the new and full moon, the tides, &c., occur at the same times as before. The other circles contain the names of the planets, the days of the week. The rest of the figures I cannot make out at present.

Second compartment.—A compass in the centre, variation marked about a point east. The first circle has the hours marked for the shadow of the gnomon of a sun dial, which is wanting, as the holes are there in which it has been placed. The next circle contains the letters of the alphabet. I think the outer circle contains the twenty-four hours of the astronomical day.

The reverse.—Compass turned round. The first circle appears to contain the names of countries, and the outer circle, which is a compass, shows the bearings from the place where this instrument was made. Around the outside are marked the four cardinal points, E. W. N. S.

The bottom.—The first circle contains the names of the first six signs of the zodiac; the second the signs and their characters; third, the degrees of each sign; fourth, the names of the months; fifth, the days of the month for every ten days. The outer circle contains every day in the half year, the next inner circle the Sunday letter, the next broad circle the names of saints and celebrated men for every day in the half year.

I perceive in this circle that the sun entered each sign on or about the tenth of each month; now it enters each sign about the twentieth or twenty-first of each month. The reverse is the same for the other six months.

E. E. W.

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LEGATION UNITED STATES, RIO DE JANEIRO, *January* 31, 1846.

MY DEAR SIR: I accept with pleasure your very curious and antique present for the National Institute. I have no doubt of its being a genuine relic of 1604, and as such, both for its apparent uses and ingenious contrivance, it is highly worth preserving. It shall be transmitted by the first opportunity, with Professor Ward's description, to Francis Markoe, esq., of Washington, naming you simply as the donor, who has been mindful abroad of your country's institutions at home for the promotion and preservation of human knowledge.

We shall be very happy to see you whenever you can make it convenient to pay us a visit; and I assure you, sir, that when you depart from this station you will carry with you the best wishes of myself and family.

Yours truly,

HENRY A. WISE.

To Lieut. B. SHEPARD, *U. S. frigate Raritan.*

VIEW OF THE ANCIENT GEOGRAPHY OF THE ARCTIC REGIONS OF AMERICA,* BY CHARLES C. RAFN, PERPETUAL SECRETARY OF THE ROYAL SOCIETY OF NORTHERN ANTIQUARIES, COPENHAGEN, MARCH 18, 1846: COMMUNICATED FOR THE BULLETIN OF THE NATIONAL INSTITUTE, BY MR. RAFN.

The east coast of Greenland was, in ancient times, uninhabited by Europeans, although from the account of Are Frode, the earliest Icelandic historian, it would appear that on the discovery of the country and survey of its coast, there were found, both on the east coast and on the west coast, remains indicative of their having been resorted to at an earlier period by the Skrœlingar or Esquimaux of America. The SVOLBARDE of the ancient Scandinavians, discovered in 1194, appears to be the tract of coast surveyed in 1761 by Volkert Bohn of the island of Foehr in Denmark, and rediscovered by Scoresby, by whom it is called Liverpool coast. The GUNNBIARNARSKER or Gunnbiarnareyiar, discovered in 877 by Gunnbiorn Ulfson, will be the islands seen off the coast by Captain W. A. Graah, R. N., in latitude 65′ 20″ N. HVITSERK, the southernmost promontory, Cape Farwell; the chief seat of the colony EYSTRIBYGD, the present district of Julianæhaab. The most important of the colonized firths are named in order from South to North in four original written sources, of which the latest and most circumstantial is a chorography by War Bardson, who in 1341 was sent by Hakon, bishop of Bergen, to Greenland, and who for many years was superintendent of the episcopal see of Gardar. HERIULFSNES with HERIULFSFIRTH, where Heriulf Bardson settled in 986, and where his son Biarne Heriulfson arrived in the autumn of the same year, after having seen the more southern American coast, is the Ikigat of the present day. Of the church mentioned in Bishop Gudmund Arason's Saga, some of the ruins are still left, and several inscriptions have here been found. Ketilsfirth, with its two churches, is the modern Tessermuit, where Mr. J. J. A. Aroe found a quantity of ruins. RAFNSFIRTH, which, in the first year of the landnam, or colonization, 986, was colonized by the landnamsmann Rafn, is now Ounartok. According to the ancient description of War Bardson, of the 14th century, there were in this firth islets with springs of hot water. There are in the island of Ounartok three warm springs, which have given to the island and firth their Esquimaux name, signifying in that language the boiling. Captain Graah, who visited the place in July, 1828, found the temperature of the water in these springs ranging from 26 to 33½ R. SIGLUFIRTH is now Agluitsok; here the rudera of Voga church were discovered by the Rev. Valentine Muller, who visited this firth in the years 1832 and 1833, on behalf of the Society. He saw, moreover, the ruins of a mansion belonging to the king, by War Bardson, called Foss, or waterfall, situated near a large stream forming a waterfall of two hundred feet in height. EINARSFIRTH is Igalikko, the ruins of the cathedral and episcopal see of GARDAR, (which was founded in 1126, and stood for upwards of three centuries,) were rediscovered at Kaksiarsuk, on the eastern arm of this firth. ERICSFIRTH, where the the chief leader of the landnamsmenn or colonists, Eric the Red, settled in 986, is now Tunnudluarbik, together with the northern arm of Igalikko firth, at which the ruins of the principal settlement of BRATTAHLID, with Leidar Kirkia, (the church of the district,) have been found, and especially among the numerous buildings there, rudera of the house of Brattahlid itself, so denominated from its having been built up against the side of a steep precipice—from *bratt* and *hlid*. The Rev. Mr. George F. Jœrgensen, who has furnished a description and ground plan of the whole settlement, which may be compared to an entire town, observes that a steep rock forms one of the walls of this house, the building of which was accomplished with incredible labor. This house was built by Eric the Red, who, in the year 986, made it his residence. It was subsequently occupied at the commencement of the eleventh century by his celebrated son, Leif the Happy, and by his grandson, Thorkel Leifson, and it continued down to the latest times of the colony to be the abode of the sheriffs, (logmenn.) Here in this house the far-famed couple Thorfin Karlsefne and Gudrid Thorbiornsdotter celebrated, in 1007, their nuptials, and determined on their remarkable voyage of discovery to that more southern land which, seven years before, had been discovered and visited by Leif Ericson, viz: Vinland (the present Massachusetts and Rhode Island.) ISAFIRTH, which was the most western firth in the Eystribygd, will be

* From accounts contained in old northern manuscripts.

the great bay in which lies the island of Sennerut. One arm of this firth was called UTIBLIKSFIRTH, a name adopted by the ancient Northmen from the Esquimaux, with whom they must consequently have held intercourse at an early period in Greenland; for it is the Esquimaux word *Utiblik*, signifying an isthmus, and there is here a remarkable isthmus which the Esquimaux still call by that name. Eystribygd comprised anciently one hundred and ninety settlements, with twelve churches, of most of which unquestionable ruins have been found. The site of VESTRIBYGD, which included but ninety settlements and four churches, lay farther towards the north, and the ancient STEINSNES must be placed in Aglomersot, RANGEFIRTH at Amaraglik; AGNAFIRTH, with a church at HOPE, in Baals Revier, in the present district of Gotthaab, and LYSUFIRTH will be Isertok, in Sukkertoppens district. Of the ancient NORORSETUR, or summer stations for fishing and hunting, we may mention BIARNEY, (which had been already visited in 1007 by Thorfinn Karlsefne, in his voyage to Vinland.) now Disco, the island of Kingiktorsoak, to the north of the most northern of the present Danish settlements, Upernivik, where a curious runic stone from 1135 was found in 1824, and KROKSFIRTH, through which some clergymen from the episcopal see of Gardar performed, in 1266, an exploratory voyage, and which, from the astronomical notices contained in the ancient accounts of his journey, are proved to be Sir James Lancaster's Sound and Barrow's Strait, together with Prince Regent Inlet.

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THE ROYAL SOCIETY OF NORTHERN ANTIQUARIES published in 1845, GRONLANDS HISTORISKE MINDESMŒRKER, (*The Historical Monuments of Greenland*,) vol. III, (958 pages, with twelve copperplates,) which closes this work. The first and second volumes, pp. 814 and 794 respectively, were published in 1838. After Professor Rafn had finished the compilation of his separate work, ANTIQUITATES AMERICANÆ, which was published by the society in 1837, he joined himself along with Professor Finn Magnusen for the purpose of editing (also under the auspices of the society) the great collection of original written sources of the ancient history of that remarkable polar land, which was first seen in 877, and colonized in 986. With a view of doing all that lay in its power to throw light on ancient Greenland, the society, during the ten years from 1832 to 1841, caused journeys to be undertaken and explorations to be performed in such of the Greenland firths as were of the greatest importance in respect to the ancient colonization. By excavations made among the ruins remaining from the ancient colony, there was obtained a collection of inscriptions and other antiquities, which are now preserved in the American Museum erected by the society, and drawings were taken of the ground plans of several edifices. Of the reports received on this occasion, we must in an especial manner notice, as exhibiting evidence of the most assiduous care, and as moreover embracing the most important part of the country, the explorations undertaken by the Rev. George F. Joergensen of the firths of Igalikko and Tunnudluarbik, where the most considerable ruins are situated. The present volume 3 contains extracts from annals and a collection of diplomas relating to Greenland, compiled by Finn Magnusen, (to this part appertains a plate exhibiting seals of the Greenland bishops;) ancient geographical writings, compiled by Finn Magnusen and Charles C. Rafn; the voyages of the brothers Zeno, with introductory notes and remarks by Dr. Bredsdorff; a view of more recent voyages for the re-discovery of Greenland, by Dr. C. Pingel; an antiquarian chorography of Greenland, drawn up by J. J. A. Worsaal from the accounts furnished by various travellers of the explorations undertaken by them. The work is closed by a view of the ancient geography of Greenland, by Professor Charles C. Rafn, based on a collation of the notices contained in the ancient manuscripts and the accounts of the country furnished by the travellers; to which is added a list of the bishops and a chronological conspectus of the ancient and modern history of the country, a historical index of names, a geographical index, and an antiquarian index rerum. Copperplate maps are annexed of the two most important districts of ancient Greenland: the eastern settlement, (Eystribygd,) and the western settlement, (Vestribygd,) exhibiting the position of the numerous ruins. Moreover plans and elevations of the most important ecclesiastical ruins and other rudera; also, delineations of runic stones and other northern antiquities found in Greenland.

SCRIPTA HISTORICA BLANDORUM, Latine reddita et apparatu critico instructa, curante Societate Regia Antiquariorum Septentrionalium, vol. XII. The edition first commenced by the Society of the Historical Sagas, recording events which happened out of America, (Iceland, Greenland, and Vinland,) particularly in Norway, Sweden, and Denmark, in the original Icelandic text, with two translations, one into Latin and another into Danish, thirty-six volumes, has now been brought to a completion by the publication of the abovementioned volume, (pp. 658 in 8vo.) wherein are contained regesta geographica to the whole work, which, for this large atlas of Sagas, may be considered as tantamount to an old northern geographical gazetteer, inasmuch as attention has also been paid to other old northern manuscripts of importance in a geographical point of view. Complete, however, it cannot by any means be called, neither as regards Iceland especially, and other lands in America, whose copious historical sources have in the present instance been but partially made use of, nor, also, as regards the European countries, without the Scandinavian north, for whose remote history and ancient geography the old northern writings contain such important materials; but it is to be hoped that the society will in due time take an opportunity of extending its labors in that direction also. The present volume does, however, contain a number of names of places situated without the bounds of Scandinavia, in countries of which mention is made in the writings published in the work itself. To the name of each place is annexed its Icelandic or Old Danish form, and the position of the place is investigated by means of comparison with other historical data and with modern geography.

SOUTH AMERICAN COTTON.

LETTER FROM MR. GRAHAM, U. S. CONSUL, BUENOS AYRES,

On the cotton of Corrientes, a province of the Argentine Confederation,—the mode of cultivating, carding, spinning, weaving, &c., &c.

CONSULATE OF THE UNITED STATES OF AMERICA,
BUENOS AYRES, *March* 17, 1846.

SIR: I send you herewith a specimen of the cotton of Corrientes, as it is picked from the tree. Corrientes is one of the provinces of the Argentine Confederation, and is now in rebellion against this Government. It is on the Parana river, between Entre Rios and Paraguay. I also send you the implements used by the Corrientenos for carding and spinning this cotton, and a specimen of the cloth manufactured from it. These were presented to me by Mr. John C. Hayes. Mr. Hayes is a native of New York, has lived sixteen years in Corrientes, and is now a resident of this city. From him I obtained an account of the manner in which the cotton is cultivated. The seed is planted about six feet apart each way; the tree bears the first year, and, in his language, "forever after." It attains about the size of our quince tree, and requires no cultivation except the occasional cutting off the top to prevent it from growing too high. At the time for picking, a hide is drawn by a horse between the rows, and the cotton picked and thrown into it. The seed is picked out by hand. The females then, with a small bow, one of which I send you, "card" or bow the cotton, so as to lay the fibres all in one way, and to remove all foreign particles.

It is then spun with little sticks, one of which I send you, by twirling the stick with the fingers and letting it run on the floor whilst the fingers are employed in drawing out the cotton. Mrs. Hayes, who is a native of Corrientes, showed me the process of carding and spinning, with the implements I send you. The raw cotton around the stick was prepared with the bow, and the thread spun by her.

The weaving is performed in a manner as primitive as the spinning. They drive

four sticks into the ground under the shade of a tree, and stretch the warp on these. The reed and beam are suspended from the branches of the tree, and the shuttle is a rude instrument fashioned with a knife. I never witnessed the weaving, but had it described to me by Mrs. Hayes.

The napkin I send you was spun and wove by her in Corrientes. The open work at the ends was done with bobbins around pins stuck in a cushion. These napkins are used for wiping the hands after dining, and for covering presents of fruits and other things sent to friends. They are highly prized here; the one I send you was worth, when new, a gold ounce. The wealthy people of Corrientes wear goods manufactured in the manner I have described, some of which are very fine and durable. Foreign cottons are not much worn, and chiefly by the poor.

Mr. Hayes could not tell me how much cotton an acre would produce, but he says the crop is abundant, and land so cheap that they never estimate it by the acre. He bought a large tract at the rate of about three or four cents per acre. He says the climate is healthy, and the means of living abundant and cheap. Labor is low, and he thinks if the government were stable and the taxes and export duties moderate, that cotton could be put on board vessels baled, even as it is now cultivated, for about five cents per pound. Paraguay, Salto, and parts of Entre Rios and Tucaman, are as well adapted to the growth of cotton as Corrientes. Paraguay and Corrientes are leagued by treaty in a war against Governor Rosas.

With much respect, your obedient servant,

JOS. GRAHAM, *U. S. Consul.*

FRANCIS MARKOE, JR., Esq.,
Corresponding Secretary National Institute, Washington.

LETTER FROM ALEXANDRE VATTEMARE, PARIS,

Announcing a present, of the great work of the French Government on Egypt, and other valuable books, to the National Institute at Washington.

PARIS, *April* 15, 1846.

MY DEAR SIR: The following is a true copy of his majesty's ordinance granting, at the request of the Minister of the Interior, to the "National Institute of Washington for the Promotion of Science and the Useful Arts" a copy, on fine paper, of the great work on Egypt. I trust that the members of the Institute and the citizens of the United States will receive this additional token of our brotherly feelings towards them with a gratification equal to that which I feel in transmitting to you this flattering intelligence, &c.

Your friend and obedient servant,

ALEXANDRE VATTEMARE.

Minister of the Interior, Division of the Fine Arts.

LOUIS PHILIP, KING OF THE FRENCH, *To all to whom these presents shall come, greeting:*

On the report of our Minister Secretary of State of the Interior, we have ordered and we do order as follows:

ARTICLE I. A copy, on fine paper, of the great work of the expedition to Egypt, is presented to the National Institute of the United States.

ARTICLE II. Our Minister, Secretary of State of the Interior, is charged with the execution of this ordinance.

PALACE OF THE TUILLERIES, *April* 5, 1846.

LOUIS PHILIP.

BY THE KING:

The Minister, Secretary of State of the Interior,

DUCHATEL.

P. S. I received at the same time the following letter from M. Lebrun, peer of France, Director of the royal printing office, and of the Journal des Savans.

PARIS, *March* 17, 1846.

SIR: I have the honor to advise you that, at my suggestion, his Excellency the Keeper of the Seals (Minister of Justice) has just granted to the National Institute a gratuitous subscription to the "Journal des Savans," including the volumes published since 1st January, 1844. These numbers, and those to be published hereafter, will be placed at your disposition, &c.

LEBRUN.

The continuation of this important work, with that of the Bulletin de l'Academie des Sciences, and numbers of other important publications, of which but one copy is to be disposed of in behalf of the United States, have been sent to me to be presented to the National Institute, &c.

A. V.

FRANCIS MARKOE, JR. Esq.,
Corresponding Secretary of the National Institute, Washington.

LETTER FROM DR. MACGOWAN, PRESENTING VARIOUS ARTICLES OF CHINESE MANUFACTURES.

NINGPO, *October*, 1845.

SIR: I beg to transmit for the museum of the National Institute the accompanying articles, to illustrate the state of some of the manufactures of this part of the Chinese empire. I purpose forwarding by some future opportunity a variety of seeds, with specimens of horticultural produce, with a view to their introduction into the United States. I am, sir, respectfully, yours,

D. J. MACGOWAN.

P. S. Does the Institute publish a journal of its proceedings? If so, I should be glad to receive a copy. Address D. J. Macgowan, M. D., Ningpo, China.

To F. MARKOE, JR., ESQ.
Corresponding Secretary of the National Institute, Washington.

List.

1. The common brick, used in the north of China for building purposes generally, but especially for thin, light walls. The groove on the upper surface receives a bamboo rod, connected at each end to posts which extend from the ground to the ceiling. They are well adapted for partitions in upper rooms, and in China are cheaper than boards.
2. The tile, used in the construction of thick walls. A series of hollow squares are formed with them, which are filled up with earth and rubbish.
3. The tile used for roofs. These articles are all made from a ferruginous clay which turns blue in burning. They are made of various sizes.
4. Straw shoes and sandals—articles which, at some future day, if not now, might be introduced into some parts of the Union.
5. Specimens of Chinese cutlery—a pair of scissors, a razor, and some needles. The first two articles are sold for between two and three cents each. Twenty-four of the latter are sold for a cent.
6. Specimen of the grass twine in common use in China.
7. A brush, of bamboo and hogs' bristles.
8. Soap made from lard and a species of steatite. It possesses active detergent properties, but is employed only for cloth.
9. Specimen of the candles made from the product of the tallow tree, (*craton sibiferum.*) The size sent sells for less than half a cent. The accompanying candlestick is of the usual form.
10. A Chinese lock and key; cost but five cents each.

The box will leave Canton for New York probably in December, and will be forwarded to Washington by my friends in New York.

LETTER FROM HENRY T. JOHNSON,

Offering suggestions and hints on the cultivation, manufacture, and consumption of various articles the similar growth of America and India, and of others which might be introduced into the United States with a prospect of success.

HONG KONG, CHINA, *April* 18, 1846.

SIR: Knowing the interest the National Institute, of which you are so active an officer, takes in whatever concerns the development of the resources of our common country, I am induced to offer you a few suggestions and hints on the cultivation, manufacture, and consumption of various articles the similar growth of America and India, and of others which might be introduced with a prospect of good success. They are made from personal observations and inquiries at the different places mentioned.

COTTON.—This product is cultivated throughout the vast regions of the east, between the latitudes of 30° south and north of the line, but nowhere is the quality equal to our own. The principal part which is grown comes from the Presidencies of Madras and Bombay, under the East India Company's government. It is also now attempting in Ceylon, but it will fail if it is attempted to be grown largely. The preparation is exceedingly careless and negligent, the quality of short staple, and very inferior. It is brought from the districts of Tinnivilly and Southeast India, in Madras, and Tutecoreen, Cochin, Guzerat, Surat, and other provinces of the Bombay government. It is always repicked and packed in those two cities, under the inspection of the native and European merchants, and pressed into bales containing not less than three hundred pounds by powerful screw presses, worked by *manual labor*, something on the principle of working a capstan on board ship, by capstan bars. Its principal market is China, where, on account of old prejudices, and its short, silky, tough fibre, it is preferred to American. The shipments to China rarely exceed two hundred and fifty thousand bales a year, and are falling off on account of the low price that manufactured cottons and yarns can be put down here from England and America. The consumption in China of manufactured cottons of various kinds, foreign and domestic, can be safely stated at fifty cents per annum for each individual of a population of three hundred and fifty millions. The consequence of this large consumption is extensive importations from America and England, chiefly confined to stout fabrics and yarns undyed. They are *thoroughly* acquainted with the art of dyeing in all its branches.

The Chinese, from remote times, have used cotton for various other purposes besides clothing. Their coverlets, answering the purpose of blankets, are used, as I understand, throughout the nation, north and south, in conjunction with woollen blankets. They are made by carding the cotton in layers, something or rather in the precise form of what we call "cotton batting" in the United States, and covered with calico ticking, quilted as we do at home. This, and the making it into mattresses and pillows, and also stuffing into clothes, which are quilted in the same way as their coverlets, makes a large consumption throughout the country. A Chinese in the southern provinces uses very little wool in winter, preferring silks and these stuffed cotton jackets and cloaks to any thing else. They likewise use it in large quantities, in conjunction with bamboo, for making the finest qualities of their paper. These facts are well worthy the attention of our cotton planters.

There is a large consumption of native-grown cotton in Java and the other Dutch possessions of the Eastern Archipelago, as there is also in the Spanish islands of Luconia and Mindinao. The Malays of these islands are very ingenious in the manufacture of their cotton fabrics, and make nearly enough to supply the demands of their several countries. They are tolerably acquainted with the art of dyeing, and their dyes stand well. If the Dutch and Spanish Governments were not so monopolizing in their policy, there would be, doubtless, a much larger consumption of American yarns and cotton fabrics in these vast continental regions of the east. It is a singular fact, not generally known, however, that Javanese and Bugese made cotton fabrics meet in the Singapore and Penang markets in large competition with English and American articles of the same nature.

The people of India witl never be able to compete to any extent with the United

States in the cultivation of cotton. The nature of English and native capitalists is too monopolizing, obstinate, and prejudiced in its *effects* to perform any thing in this way to frighten us. Truly it is difficult to learn an Englishman any thing, on account of his strong prejudice of pride and conceit of the kingdom of Cockneydom and its subjects. They are likewise very expensive in their management of business, which is a great drawback to success in a full competition. It is difficult for an Englishman to make an estimate, unless based on large, and, according to his fashion, generous and liberal principles. He does not know how to cramp and economise like the Scotch, and never likes to do any thing in a small way. The consequence is a cumbrous and most expensive government of his Indian kingdom, but yet full of energy and power, which inspires confidence. The "Honorable John Company" can borrow money of the native and European capitalists at five and six per cent., when other parties, as merchants and others, have to pay seven, eight, and nine per cent. Singular facts in favor of John's honor, and likewise of his *penchant* for manufacturing offices, places, and jobs for his darling young scions of nobility and gentry.

The consequence of operating on these principles is, that he meets a fearful competitor in his son Jonathan, who, in the first place, constitutes a cheap and liberal Government; secondly, sells his lands cheap; thirdly, taxes his children lightly; and fourthly, encourages emigration as much as possible. An expensive Government will always oblige the ruling power to levy heavy taxes to pay its officers and other contingencies, which will press on the means of subsistence of the poorer and middling classes of its subjects. It prevents the consumption of foreign products by lessening the facility of free competition with other nations, in some degrees favorably situated for performing what they themselves could do much cheaper by their heavy capitals. An instance of this is palpably evident, now operating throughout the British possessions in the east and west in the article of shipping. To assist to raise the several heavy revenues of the British Government, the East India Company, and the colonies, they are *obliged* to (or they do) lay heavy duties on the provisions, timber, and other articles from foreign countries used in ships and shipping. This of course induces the shipowners, in consequence of the great increase of expense, to ask a monopoly of shipping for their own crafts between their own possessions and from foreign countries. It need not be stated that this makes them careless, extravagant, and, consequently, monopolizing and lazy. It is a fact that an American ship can be sailed and worked on a short or long voyage for two-thirds the expense of a British or colonial one! The Americans carry less men and work them harder, but their provisions and treatment are generally far better than on board English ships. At this present time American ships are taking freight from India and China for 4 to £5 per ton to America, while English and Company's ships to India and Britain are asking and getting 5, 6, 7, and £8 per ton to their several destinations. And yet the American profits are better, because they sail much faster, and load and unload quicker. Can any thing plainer exhibit the effects of monopoly and high duties?

The entire growth of cotton in British India and Ceylon may be safely put down, after much inquiry on the subject, at 800,000 bales of 300 pounds each. The disposition of this crop, more or less, is nearly as follows:

Shipped to China from Calcutta, Madras, and Bombay.....230,000 bales.
Shipped to England from the same places.....200,000 "
Manufactured in India by hand looms.....570,000 "

The manufacture of cottons in India is still in a vigorous state in many parts, particularly in Madras, where the workmen are very ingenious. They are much superior in quality, as regards strength and durability, to any other. Their manufactures consist of longcloths, (selling in the markets under the style of Corahs, piece goods, &c.,) towels, sheets, bedticks, coverlets, tablecloths, maskelto nettings, &c.

Cotton seeds are used in India as food for cattle before and after they have been pressed. They make a good deal of oil from them for use in medicine—applied to the skin for clearing it of spots and freckles, and also, I believe, for burning and other purposes. Some years ago small quantities of oil were made in our southern States from the cotton seeds, and I do not see why it should not be made in an extensive way, for the purpose of lighting, oiling machinery, and other purposes. The seeds must be dried before pressing. The oil has been said to contain too much muci-

laginous matter to be used for burning. This may be got rid of by the same means that the oil manufacturers free common train oil from its gum.

RICE.—This article consists of numerous varieties, of which few know even the name, and is susceptible of a wider range of climate and temperature than cotton. It grows throughout the regions of the east, at all altitudes below those of snow and frost, and even in some parts of China where the rivers are frozen almost every year, as at the mouths of the Yang Tze-Kiang (33° north) in northern China, where the product is very large. Of late years it has been extensively grown at very low prices in the English settlements of the Malacca straits, particularly in Arracan, Province Wellesley, and other districts in that neighborhood. These countries have become, since 1836, large exporters of rice to *China*, and in years of scarcity to various parts of India, the Cape of Good Hope, and Mauritius, and sometimes to Persia and Arabia. Its price is generally from $1 to $1 25 per picul of 133⅓ pounds. Bengal is, however, the granary of the east, producing on its low grounds not only immense crops of rice, but wheat, and other esculent grains and pulses. In years of plenty large shipments are made at low prices to Arabia, the Red Sea, Persia, Muscat, and other countries of the east. But little Bengal rice comes to China. It is likewise sent to England, the Cape of Good Hope, the Mauritius, and Bourbon. At these two latter Islands they pursue the foolish policy of the West Indian and our southern planters, who buy *all* their provisions, and use their capital entirely in the production of coffee and sugar.

There are probably not more than thirty foreign ships—American, Spanish, Dutch, and English—which bring rice to China. It is procured by these vessels in the islands of Java, Luconia, Bally, Lombock, and other countries of the Archipelago. The price per picul (133⅓ pounds avoirdupois) in these countries is often as low as 60, 70, and 80 cents. But the greatest importations of rice into China come from Siam, where there is a numerous population of Chinese emigrants, and from the colonies of Honan and Formosa. It is likewise brought from Tonkin, Cochin China, Cambodia, and the islands of the Archipelago. From these several countries the Chinese junks, frequently of 500, 600, and 800 tons, bring the largest importations, which of course must be very great, as the duty is merely nominal and the consumption obtains among the whole nation of three hundred and fifty millions. It is literally the "staff of life."

Rice is cultivated in the east, on the lowlands, in a similar manner to our South Carolina and Georgia method, but of course not so scientifically. It is done mostly by small proprietors of two, three, four, and ten or twenty acres—seldom more. The whole family, men, women, and children, assist in the cultivation, gathering, and preparation for market. The harvest, in all parts of India and the east, is a great time of merriment, feasting, and jollity, particularly as I have seen it in India and the island of Ceylon. All the neighbors assist each other, when necessary, in the weeding, gathering, and preparation, and I may well add, universally in the eating of it. It is the custom to steam it for a short time before husking. The rice is then dried on small mats in the sun, and pounded in a wooden mortar, when it is cleaned by the women by sifting and winnowing in bamboo sieves, shaped like a flat shovel or scoop, with a raised rim around the part held by the hand. The steaming lightly enables them to get off the red skin with much greater facility.

Rice is raised in the mountains of Ceylon, India, and other parts of the east, on terraces formed by embankments made with much labor, where there are small intervals, with rivulets or brooks, capable of answering the purposes of irrigation. At a distance, when the grain is ripe, nothing can be more beautiful in nature than these cultivated terraces, interspersed with cottages—which are generally very neat and well kept in Ceylon and India in these situations, the mountaineers being a hardy, independent race of men, half embosomed in the shade of the beautiful and luxuriant trees and foliage of the tropics. These situations are very valuable and healthy, and, where there are three or four hundred acres available, usually appears a small village, with its shops, smithery, temple, and other appurtenances of oriental civilization.

Rice may be divided into two great orders, each subdivided into numerous species, cultivated at different altitudes, and in different temperatures, viz: that cultivated by laying it under water at certain times, and the other raised on dry land. In Bengal and all low countries throughout the east they pursue the same principle, by a more roundabout method, that we do in Carolina and Georgia, viz: by

laying the land under water, light ploughing, hoeing, manuring, &c. Their manner of gathering and preparing it for market is likewise on the same principle as ours: cutting it down with sickle or reaping hook, (with serrated teeth, cut only on one side of the hook, and at an inclination with the handle,) and pounding it in a mortar. It is never attempted to be polished, as with us, and *it is always much broken* in the preparation. There are but few qualities of Asiatic rice equal to American, and these confined to the edges of the tropics and the higher altitudes inland. There are no steam or water or wind mills, that I have heard or read of, in the east, which are used for facilitating the husking of the grain, and so cheapening its price and saving much of it from bruising and breaking. This is a singular fact. The English, with all their capital, have never, to my knowledge, erected a single rice mill or threshing machine in their Indian possessions, though they have, in conjunction with our own citizens, erected large and expensive establishments at Charleston, Savannah, and other places. From what causes this has arisen, when there are so many projects afloat in India, and have been for the last thirty years, and large English and native capitalists ready to embark in any undertaking promising a moderate profit, I am unable to conjecture. If some of our sharp southern planters or New England mechanics, acquainted with this subject, were to come out to India, particularly Calcutta, I have no doubt, with prudence and economy, they would eventually overcome all difficulties and realize handsome fortunes. But they must exercise much patience. The East India Company's government is very willing to encourage foreigners in any undertaking of this character.

The other quality of rice is raised on virgin land, on the highlands. The trees and brushwood are first cut down and burnt as clean as possible, when the ground (just after the rainy season has terminated, or rather a spell of wet weather) is sown broadcast with the rough rice. I really do not know if lowland rice is capable of being raised in these dry situations. The quality is always superior to any other, fetching higher prices. Rice throughout the east, before it is sown, is soaked, and even often allowed to vegetate, before it is put into the ground. At the time of sowing, and before it has taken root, there is much difficulty experienced from the birds destroying it. To scare these away they use precisely the same plans that we practise in the States to keep the crows from our cornfields.

These are facts interesting to our southern and western planters. As the price of cotton is so low at present, I have no doubt they would find it of great advantage, after felling the forest and clearing the new lands, to sow two crops of rice before they put in their cotton. The Cingalese sow two crops of rice *in the year* on these lands, and the yield is very great and of the finest quality. If they wish to cultivate them in rice another year they have to manure the land, and return the chaff and straw to the soil by burning. They never cultivate the same piece of land the third year, as this kind of rice is a *great exhauster* of the soil. Such lands are then left to grow up in jungle again for ten or twelve years, when it is again felled and planted. Probably our planters on the rich bottoms of Alabama, Mississippi, Louisiana, and Florida, by their skill and knowledge acquired after a few years, may be able, by manures and rotation of crops, to grow the two products of rice and cotton on the same land. In Java the Malays grow a change of crops on their lands, by sowing rice at the beginning of the season and tobacco at the end of the rice crop. The rice is flooded, and the tobacco is produced without the use of water. I was told by a gentleman resident in Manilla that he had frequently seen rice growing at the commencement of the season, and, after it had been reaped and the land turned over by ploughing and hoeing, waving with a rich crop of wheat. It may safely be stated that *rice* forms the staple food of the population of the following eastern countries:

China	350	millions.
Siam, Cochin China, Cambodia, and Tonkin	15	"
India	200	"
Indian Archipelago	20	"
Ceylon	2½	"
Arabia, Persia, Mauritius, Bourbon, and Madagascar	10	"

Sugar.—Sugarcane is grown in Bengal, Madras, Ceylon, the Malacca settlements, Siam, Burmah, Cochin China, China, Java, Luconia, Mauritius, Bourbon, and finally everywhere within the tropical east. The cultivation has surprisingly

extended in Bengal within the last five years, and since 1843, in Province Wellesley, (in Malacca Straits,) Ceylon, and Madras, particularly the last. In the Province Wellesley planters have entered largely into the speculation of sugar growing within the last year, from the East India Company having offered great facilities in the shape of very cheap lands. They have an abundant supply of Chinese laborers at very low rates, who are acquainted with the cultivation and growth of sugar in their own country. Their prospects are said to be very good, as the land is very rich, and they are near the seacoast; but the country is overrun with elephants, tigers, and other varmints. There are also a few estates in Penang and Singapore island. The quality of British Indian sugars is much better than formerly, as capitalists have erected large refineries and boiling-houses with all the latest improvements. In Bengal and Madras, and some parts of Bombay, they purchase the raw sugar or the cane from the cultivators, and grind and manufacture it into the different qualities to suit the English markets. I have no doubt that the English in India in a few years will be able to sell their sugars in England at four cents a pound with a good profit, as labor is very low and living cheap. The estates in Ceylon are only sufficient to supply the demand for that island.

The cultivation is also much extending in Luconia, under the Spanish Government, who are offering facilities to capitalists to grow the cane. Land is sold cheap, labor is low, and living very moderate. The only drawback is the want of roads and partial insecurity of the Government. Most of the Manilla sugar goes to England, New South Wales, and the British possessions in that quarter. Many cargoes of the Siam sugar are shipped to Bombay, the Persian Gulf, and the Red Sea, and much of it goes to China. The sugar of Java goes principally to Holland, some to England, and a few cargoes to America and New South Wales. That of Cochin China and Burmah finds its way to China or Bengal, where it is remanufactured. The Mauritius sugars are of very strong quality, and almost entirely consumed by the English refiners. The Chinese sugars are principally brought to Canton from the islands of Formosa and Honan, and the province of Fukein. The consumption in China is very great, but it may be often bought in Canton for from three dollars and a half to seven and a half per hundred. The latter price is for Canton refined or rock candy, which is of a strong quality. If the cost of freight were not so high it would leave a fair margin of profit for shipping to England and America. The sugars of Bourbon are shipped to France. The cultivation of sugar is not at present extending in Java, from the most of the lands susceptible of cultivation being already under culture, and from the monopolizing selfish policy of the Dutch.

Tobacco.—This article is of universal consumption in the east, and is grown in all the islands, and in China, India, and other countries eastward of the Cape. The best quality is grown in Manilla and Persia. The Manilla is sold entirely in the shape of cheroots, and it has the complete monopoly of the eastern market among Europeans and their descendants. The Persian is principally sold among the Arabs of Arabia, the Red Sea, Egypt, and Judea. It is of very fine quality. An account of the cultivation and preparation may be seen in Porter's Tropical Agriculturist. The tobacco of Trinchinopoly, in Madras, is also very fair, and is much used in the manufacture of cheroots, the consumption of which is large among certain classes in the Presidencies of Madras and Bombay and the island of Ceylon. The tobacco of Java is not so good in quality, and the consumption principally confined to that country and to a small extent in China. The tobacco of China is of very inferior quality, very weak, and of unpleasant flavor. Tobacco is used throughout the east in combination with the areca nut, betel leaf, and other stimulating articles, as a masticatory. They are ten times filthier than tobacco chewers. If small shipments of the best American *leaf* tobacco were made to China, at low prices, it might, in the course of a few years, become a considerable export to that country. The East Indies at this time offer also a very good opening for the cigars manufactured in our different eastern towns of Spanish tobacco. They ought never to be shipped, however, even of the best qualities, at a higher price than twelve dollars per thousand. An article between eight and ten dollars would, I am convinced, if the quality were fair, always meet with a fair demand in India, Ceylon, Mauritius, the Cape, and China. The price of the best Manilla cheroots is seldom under eleven dollars per thousand.

Much of the tobacco of Java goes to Holland in baskets. The Burmese tobacco is of very good quality.

Coffee.—This article is not cultivated by us, and all our lands are subject to the visitation of frost, which speedily kills the tree. The cultivation of coffee is not extending in Java, but it is in Luconia and Sumatra. The coffee of Sumatra is not first rate, from the bad preparation; that of Luconia is among the best. The cultivation of coffee is very much extending just now in the Madras territory, on account of the lowering of the duties in England, which is bringing it into consumption; but the quality is very poor, from the ignorance of the natives.

But the greatest field which has been opened for the cultivation of coffee for the last ten years is undoubtedly the fine cool mountain lands of the island of Ceylon. The Government, to induce the cultivation of the article, in 1839 sold the land in fee simple, with a good title, for five shillings sterling per acre. It had previously been tried in various localities and proved successful. Such was the demand for these lands after 1841, that the Government afterwards raised the price to one pound an acre, and finally to two pounds in 1844.

No country is better suited for the cultivation of coffee than the island of Ceylon, as respects soil and climate. They have also great facilities in procuring laborers from the Malabar coast, at a cost of seven pence sterling per day. The Government is safe; but, like all other English colonies, very expensive. Ceylon is one of the few colonies which pays its entire expenses, civil and military, and is no burden to the mother country.

There are not far from five or six hundred estates at the present time in the interior of Ceylon, having not far from three millions of pounds invested in the cultivation of this commodity. The quality is very superior, and I have seen it sold in the island for a higher price than Mocha. The yield of the trees is also very heavy, often producing six, seven, and eight pounds a tree, and always, in good situations, an average of three pounds on the whole estate's crop. Eight hundred trees are planted to the acre. The exportation to England in 1846 will be very large, as most of the estates will be in full bearing by the end of the year.

Many are the fortunes lucky individuals made in Ceylon during those years in which we experienced such great commercial and financial difficulties in England and America. The whole business has sprung up since 1837, and, generally, on solid bases, being the investments of civil and military officers, and English and Indian capitalists. The rage for lands is at present very great, and doubtless the consequence will be an overproduction and great fall of prices. Those persons who have estates in bearing now (for the tree comes into bearing in three years) are reaping harvests of gold, and the consequence is great prosperity in the country and extravagance of living. I have seen a good many old West Indians who had come out on hearing from their friends the prospects of those engaged in the business. But John Bull, with his horde of hungry officers, will soon lay the stripes of taxation and monopoly on the backs of these lucky individuals. Some of the cautious old hands are even now, while the estates are yielding such handsome profits, quietly eking out of the market.

Ceylon offers also many openings for the cultivation of the cocoa nut and sugar-cane; the first of which is a valuable product, and has been the staple of the island from time immemorial. Yet the demand is very great, and cocoa-nut lands are worth, at the Government land sales, two pounds per acre. The tree comes into bearing in seven years, and after the second year needs no further attention.

A small number of men is sufficient to keep one hundred acres in order. The cocoa nuts are sold as they drop from the tree to the Mahomedan merchants of the island, or broken, and the kernel taken out after it has been exposed to the sun for a few days, and sold to the English merchants, who have large mills in Columbo for making the oil for shipment to India and England. It is used in England for making candles, and in India for burning, cooking, &c. Arrack is manufactured from the spatha of the flower before bursting, by tapping it and suspending an earthen pot over night at the incision. It is then fermented, and afterwards distilled in the small distilleries which line the whole coast of Ceylon for five hundred miles, for the entire seashore of Ceylon is belted with these useful trees. The fibrous covering of the nut is taken off for making "coir rope," which is used throughout the east in the rigging of vessels and for every purpose for which rope is wanted. It forms a large article of export to England and India, and is afforded at very low prices. The cocoa-nut tree is likewise used for making canoes, houses, and for various other purposes. The seams of their small schoon-

ers, called "dhorices," and of their boats, are never made close like ours, but filled with the loose coir, and *sewed* with the lacings of bamboo, ratans, and other fibrous plants, and the timbers not kept together in any way by nails or spikes. The ribs of their boats are also few in number. The reason of this singular construction is, that the surf is so high and dangerous all around the island, that these boats are able to stand the terrific thumpings caused by the heavy swells of the ocean, where an American or European boat or vessel of the same size would go to pieces in twenty minutes. The value to the island of Ceylon of the cocoa-nut tree cannot be far from three millions of pounds per annum.

The best quality of cinnamon, called the "true cinnamon," is only grown in this fertile island, not far from the seacoast. The Government have sold out their monopoly of the Cinnamon Garden to private parties, who are making a very good thing of it. The colony levies an export duty of sixpence a pound, which brings in a considerable revenue. The nutmeg, clove, and spice is likewise grown in Ceylon, but not as yet to any extent, though the experiments made have all succeeded. The black pepper is also grown with much success, but not as an article of profit. Cotton has been tried, but will be able to do nothing in competition with the American and Indian.

The Bamboo Cane.—This article is similar in its appearance to the "cane" which grows in our southern States, and the numerous purposes to which it is applied in India and China astonishes an American. It is a much larger variety than ours. It is used for fences and hedges, for making paper, for laths, for scaffolding for builders, for making ropes and cables, (it is always split by sharp drawing knives, after being soaked in water, before it is used for this purpose,) making drinking cups, baskets, hats, and other uses which it would be difficult to enumerate. The consumption of paper manufactured from the bamboo is of almost infinite variety of quality in India and China. The bamboo is cut down when not too old, split, and then soaked in water. It is afterwards cut up into small billets and pounded in mortars until all the fibre is separated and reduced to a pulp. It is said then to go through nearly the same method of preparation as we have in America and Europe. The paper this is written on is made for the use of foreigners, and is sized with alum and a glue made from seaweeds. Some of the finer kinds are made by mixing refuse cotton and cotton rags. This quality is made principally at Nankin. Large shipments are made to all parts of the Archipelago of the inferior qualities of Chinese paper. There are two European establishments for manufacturing paper at Calcutta which use bamboo freely. The Calcutta press is principally supplied by these two establishments. One of them is owned by Mr. Marshman, son of the late Dr. Marshman, of the English Baptist Missionary Society at Serampore, a short distance above Calcutta. The other belongs to a Parsee gentleman. I do not see what is to prevent our countrymen from entering into the business by using the article which grows so plentifully at the south and west. It evidently only wants application and a little attention to show that we can do with the same article what the Chinese and Hindoos have done with it from time immemorial. The young shoots of the bamboo, as they emerge from the grounds, are also *extensively* used in China as a vegetable and pickle.

White and black Mustard Seed is grown in large quantities in continental India, for the purpose of pressing into oil, which enters into the consumption of Indian cookery to a greater extent than any other vegetable oil. It is also used for burning where cocoanut oil is dear. The seeds are also exported in large quantities to England, for the manufacture of mustard. Jute is raised in large quantities in Bengal, for the manufacture of gunny bags and gunny cloth, used in these countries for bagging coffee, rice, seeds, &c. The cloth is used for making tents, cotton bagging, &c. The raw fibre is used for coarse ropes for the baling of cotton, hides, hemp, mats, and various other purposes.

Linseed is sent in large quantities to England and America for pressing into oil. It is chiefly grown in Bengal. The article we call peanuts or groundnuts, in America, is largely used in China and some parts of India for the purpose of making into oil for burning. The Chinese use large quantities of it for this purpose, but it is not so good as some other vegetable oils for giving light.

The following is a recipe for making cocoa nut oil soap, which, with bene oil, is used exclusively in India, and is very strong. Possibly cotton seed or lard oil may be substituted for cocoanut and bene. It has the property of washing in *salt*

or hard water. It is manufactured largely in the cocoanut district along the Malabar and Coromandel coasts, particularly at Tranquebar:

Overmunnoo and poonheer, (native names for substances containing *soda*, used likewise in dyeing, bleaching, tanning, and making native glass.) common salt, saltpetre, and lime; *proper* proportions of each of these being chosen, they are bruised together, and to the whole is added water sufficient to dissolve their active properties; the mixture is well agitated for several hours, and allowed to stand for three days. The clear liquid is then drawn off and boiled to the same consistence as we do our soaps. The *oil* is put in when the liquid *begins* to boil.

Gambier (i. e. cutch) is extensively grown in the island of Singapore, for the purpose of being boiled down to an *extract* used for tanning leather in England, and in China for mixing with betelnut as an astringent. The plant is a small shrub, which grows up quickly, and is principally cultivated by the Chinese emigrants in the Strait settlements. Could not madder, sumac, quercitron, and other vegetable substances used for dyeing and tanning, be concentrated in a similar way—thus saving much expense of freight?

The sesamun, bene seed, or *gingilee* oil is much used for burning, cookery, and medicine in the south of India. The leaves of the castor oil plant are used in some parts of India for feeding *silk*-worms. The castor oil bean is pressed in large quantities in Calcutta for the English and native markets. It is of better quality than any other in the world. In some parts of the country it is used for burning. In China it is used in medicine. The Chinese also use large quantities of the young soft horn of the deer for *medicine*. It brings sometimes the price of five dollars per catty (one and one-third pound.)

Indigo.—This article is produced in the largest quantities and of the best quality in Bengal. Some good qualities also come from southern India, by the way of Madras and Bombay. It is also grown to much extent in Manilla and Java. The Chinese, who use blue dyes extensively for their cottons and silks, are the principal consumers of these last qualities. That of Bengal and Madras goes to Europe, Arabia, Persia, the Red Sea, and America. The indigo plant is grown with the greatest success in precisely the same kind of country, and nearly the same latitudes, as the lower part of Louisiana, Florida, and Alabama. What is to prevent our planters embarking in the speculation but want of knowledge on the subject? It is at present the most valuable staple of India after rice and opium, and supplies the markets of the world, with but small exceptions. But it is right to mention, though the profits of it are large, that it is attended with great risk, and many fortunes are gained and lost in the business in a period of three years.

There are large quantities of *liquid indigo* used by the Chinese, which is grown and manufactured for them by their countrymen in Luconia. How it is made, I am not aware of

There are likewise many other eastern products which might be grown in our southern States bordering on the Gulf. The Mangoestein, which grows in Siam, and Dorian plum in Java and Malacca, I have very little doubt, could be grown there. Probably the bread fruit might also be propagated in those countries; and if the banana and plantain are not already there, I do not see why a trial should not be made of them, as well as the cocoanut. Probably the southern part of Texas would grow these articles as well as be admirably suited for indigo.

Indian Corn.—This article is grown throughout India, China, Java, Luconia, and other parts of the east; but it does not enter much into the consumption of the people of this part of the world, except to a limited extent by the Chinese and in the south of India. The English in India do not understand or appreciate the value of it as an article of food either for man or beast. The Chinese cook it in the same way as we do in the green state. It is not exported.

Gram.—This is a grain of a similar species to our buckwheat, only the corns are much larger and of a red color. It has a three-cornered shape. It is grown all over India, but principally in Bengal, in the same latitudes as the lower part of Alabama, Mississippi, and Louisiana. It is used throughout the Company's territories as the staple food of horses, elephants, camels, sheep, &c. It is used but little for human food. I have never heard of Indian corn being used for feeding animals in India. *Gram* and *rice paddy* are universally used for these purposes in British India, and the consumption is immense. It is exported to Madras, Mauritius, Cape Colony, and Bourbon. It is always soaked for half an hour in water, and the paddy pounded before given to the animals.

Yams.—These grow in almost every part of India, but are much inferior to the West India and Ceylon. *Cocos*, a root of a similar species, are grown extensively in the English settlements of the Straits of Malacca, and used in the same way as we do potatoes. They are capital farinaceous food when of good quality, and the product very large. They are quite as good as the West India root of the same name. Radishes, of a large species, are grown in the Malacca settlements and China, frequently weighing five and six pounds, of good flavor, and not pithy. They are used by the Chinese in large quantities, the same as we do turnips, and they are very *sweet* and nutritious. The tarro plant is also grown in China and the Indian Archipelago, and forms a large staple of food for the lower class of people. They were introduced from the South Sea Islands. They are grown on poor sandy soils. The okra plant and tomatoes grow every where in India, but they do not understand how to use them. They are generally put in curries.* Carrots of a *particularly fine* species are grown in China. They are very sweet and nutritious. They have not that rank, strong taste that ours have. They are largely used by the people here, as are cauliflowers, cabbages, and other vegetables we know of. The cabbages are much used by them in the same way as the Dutch sourkrout. The sweet potato plant forms a large item of consumption in China, the Archipelago, and Malacca settlements. They are grown on the thin sandy soils of China, by a constant system of high manuring with the contents of privies. The Chinese understand the art of manufacturing and applying manures to the soil, better even than the English or Belgians. The business is a very extensive one, and employs a great number of laborers, particularly in the gathering preparation and sale of human excrements and urine. They have been acquainted with the use of lime as a manure no one knows how long. All substances that cannot be readily manufactured are gathered up by numerous laborers among the poorer classes, and sold to the farmers and manufacturers for being burnt to get the ashes.

Many of the trees of the East might be introduced into our Southern country. I have never seen the "Pride of India" in this part of the world growing as large as it does with us; it seldom grows above ten feet. The wild mulberry I have frequently seen. The teak tree, tallow tree, and other beautiful shrubs and trees, may be introduced with great certainty of success, as they grow in precisely the same latitudes as Louisiana and other Southern States. I have no doubt the tea shrub would grow in the cool hills and rolling country of Texas, as they are in about the same latitude as the tea districts of China. It stands frost.

The gardeners in China grow a kind of fruit called "Chinese plums," precisely of the flavor of our persimmon, but as large as our largest tomatoes. It contains eight or nine seeds, similar to the persimmon. These, and another fine fruit called *lichees*, are grown very extensively in the interior and middle of China. A small delicate kind of pumpkin, weighing about a pound each, is cultivated in the neighborhood of Nankin, and sold to a considerable extent.

There are some curious plants in New Holland, Van Dieman's land, and New-Zealand, which might be introduced with us. There is a curious tree in New Holland called the *grass tree*, which I understand is fed to cattle and sheep. In New Zealand they have a species of fir which produces *at the roots* a curious resin or gum, partaking of the nature of *copal* and rosin. It has a slight terebinthine taste, and burns with a heavy thick flame. It is of light amber color, brittle, perfectly transparent, and of pleasant agreeable odor. It has been shipped in considerable quantities to England within the last year. There is another species of *tree* in the same islands which produces from the *roots* the celebrated New Zealand flax, which is largely exported to England and Australia.

Most of the islands in the Archipelago are claimed by the Dutch, even to New Guinea and Borneo! It is only to be hoped that neither England, France, nor

* The following is a good recipe for curries, used throughout India by Europeans and natives, and eaten with rice: Take three cayenne peppers, zij. turmeric, in the root, (the powder does not keep good,) one dozen grains of black pepper, one dozen seeds of coriander, a quarter of a cocoanut grated, a few grains pimento and cuminum seed, two garlic or onions, a few grains of mustard seed, and a table spoonful of butter. Pound all the articles in a mortar, excepting the butter and cocoa-nut, adding a little water, until reduced to the consistence of heavy brown sugar. Put into your curry a half pint of water, and ash, flesh, or fowl, that you wish to curry and boil for an hour. The cocoanut may be omitted, but it is a great addition. Serve your curry up with rice, and eat the same as a stew. Any kind of vegetables may be substituted for the meats, or if you like put in along with them. A good curry is one of the most delicious things in the world to eat, and forms the every day meals of Asiatics.

America will pay any regard to the preposterous claims of Holland in this respect. They treat the natives very cruelly and unjustly, and their policy is of the most narrow and exclusive character. No Europeans but Dutchmen can get a footing where they are strong, as they are immediately ordered off. They have likewise nearly destroyed the effect of their treaty of 1824 with England, by making countervailing laws of protection for shipping and manufactures entirely contrary to every fair principle in the construction of treaties. They have now the effrontery to complain of the English forming settlements in Borneo, in parts where a Dutchman has never set his foot, and is even afraid to do so, as he knows with what strong hatred he is viewed by the Malays.

The Chinese, in all the islands claimed by Holland and Spain, carry on a large and lucrative commerce in their junks, with their fellow countrymen settled in these countries; as also with the English settlements in the Straits of Malacca, where the number of Chinese emigrants is said to amount to five or six hundred thousand. In the great islands above mentioned large numbers of Chinese agriculturists and artisans emigrate every year, particularly to Java, Borneo, and Sumatra. They are an industrious and plodding race of creatures, very patient, but also very proud, and the most arrant cowards in the world. John Bull, to his credit be it spoken, treats them with great kindness and justice, and throughout the East every man, from the Governor down to the lowest Hindoo, is the same in the eyes of the law, and has as fair a chance of getting justice, if he will have the patience to hang out against the delays of the law. It cannot but be confessed that throughout India, England shows the strongest desire to govern in the spirit of humanity and freedom; though she does it in a different way to what would appear at first sight to be the best. There is, however—and it ought to be known to Americans that the best class of Englishmen in India admit that there is—much room for reform, retrenchment, and *close* watching of officials and the Government. The liberal party in England and India ought to insist on a retrenchment of the expenses of the Government and a curtailment of the company's power, cautiously introduced. It will not do to carry on reforms with too high a hand in India, as the people are with difficulty induced to forsake old ways, however injurious. It may be said with truth also, that the British Government is beloved by the great bulk of the population of Hindostan, and they have only to confirm this conviction by the general introduction of the English language and English literature. One hundred thousand white men cannot always govern a hundred and fifty millions, even of ignorant heathen. Education should be extended to the lowest of the population, which will raise them from their present degraded and disgusting superstitions to the level of intelligent beings.

The English colonies in New Holland are just now said to be in a prosperous state, and the commerce increasing rapidly. The resources of the country are becoming every day more developed, and their only drawback is the want of capital and of good steady emigrants. They have lately discovered valuable deposites of copper, iron, and lead in the colony of South Australia, near the seacoast, with every facility for shipping. Several ship loads of copper ore have been shipped since August, 1845, to England. Their whale fishery is also extending, as is likewise the raising of sheep and cattle. The exports of wool have much increased since the rise in price. I could not help but notice, in reading some of their papers lately, a spirit of independence, keen discussion, and great energy and elasticity of mind. They also are quarrelling and wrangling (and particularly in Van Dieman's land) with our common father, John, on account of the very expensive nature of his disposition and the obstinacy of his character. John will have to give in in the end, and reduce the extravagant salaries of some of his sons, and their fondness for high living and dissipation. The Kangaroos won't stand it, as they are of Anglo-Saxon blood, and the children of a hot sun.

I have often been surprised that our citizens have never extended their travels to oriental regions, particularly some of our Southern people, as there are objects highly interesting to be seen. If some of the Southern agricultural societies were to raise a fund to pay the expenses of two gentlemen, practical agriculturists, they would derive the most valuable and interesting information concerning many articles which might be introduced with great profit into our country. They might be sure of being made heartily welcome wherever the English are located, only they would have to be careful, as they ought to be, not to offend John's prejudices, and

particularly not to get into broils on the subject of slavery. The wisest course for an American to pursue abroad in this respect is to waive the subject, or quit the company, as it is of very little use reasoning with foreigners in the matter. If you cannot make up your mind to pursue either of these plans, give your opponent a clout in the face, when, as is most likely, you will get a return, which will end in set fisticuffs, when you will be satisfied, if a hero.

If any American gentlemen should conclude to travel in India, they ought to be careful to do so in the healthy season, that is, from November to March.

There are some valuable and unique agricultural, religious, and scientific journals published in India, which are invariably filled with *original matter* relating to the country. There are also agricultural societies in Ceylon, Calcutta, Bombay, and Madras, &c., which every year give a vast fund of information to the agriculturists of the country. There are likewise superior breeds of dairy and working cattle, goats, hogs, horses, poultry, and sheep, in India, which might be introduced with great and undoubted success in our Southern country. On the Malabar coast there is a superior breed of long-horned cattle, as there is also of sheep and goats, and likewise the celebrated Cochin fowls. I have seen from the north of China a superior kind of long silky-haired *sheep and goats*, with branching horns, which I am convinced would be a great improvement on some of our breeds.

There is a kind of sheep mentioned by Moorcroft in his travels in Upper India, as having wool of very superior quality, and the flavor of the mutton very fine—of one kind the breed is so small that at their maturity they are no larger than our lambs five or six months old. These are called Purik sheep; they inhabit a region very similar in temperature and latitude to our extreme southern Alleghany chain.

In the north of India, in the Hamalayas, is found a large species of sheep, used by the natives for carrying burdens of thirty or forty pounds. It has large branching horns, and in winter the hair is very fine, and they assume a long majestic beard. Some of the wool is as fine as the hair of the cashmere goat. It is called *burrel* in these parts. In Nepaul they have another variety of small sheep, with fine wool, called *kahgai*.

There is another subject which might be mentioned. Why could not Chinese emigrants be introduced into our Southern country as agriculturists and mechanics. They are good sugar and rice growers, bricklayers, carpenters, and blacksmiths, and could be imported very cheap. Doubtless one day some plan will be formed to carry into effect a scheme of emigration at a cheap rate. The Chinese brickmakers make very handsome *sun-burnt bricks*, with which they build *all* their houses. They cannot afford wood to burn them properly. The plasterers are likewise very skilful in making figures in lime and mortar, with which every considerable Chinese house is adorned. They have a curious water-wheel, made by connecting a number of paddles on hinges of bamboo or ratan, and turned by a wheel worked by two persons. This wheel is used for emptying ponds, mines, and cellars, for irrigation of land, filling casks, &c. The whole is made of wood, and works on a similar principle to the water-band, and can be made for ten or twelve dollars. It is transported from place to place on two men's shoulders. Their *blacksmiths* likewise make capital carpenters' and other mechanics' tools by the simplest processes, generally using charcoal for fire. Their stonecutters' chisels are very hard steel, and the hammer he uses of soft iron. They are capital stone-dressers.

The Chinese preserve eggs in the following manner: They take soft clay and a small quantity of salt, and mix together to form a paste, and smear the eggs with it. They will keep a long time in this. In India eggs are kept fresh for long periods—perfectly fresh, in the poorer kinds of salt, which are about the consistence of sugar found at the bottom of molasses casks. If some cheap plan could be formed for preserving eggs in our Western States, they would form a large article of export to the West India islands and England.

There are two articles which are singular in their nature and of great value, which are of great consumption in China, viz: bird-nests and the sea-slug, called *beche de mar*. The bird-nests are taken in all the islands and mainlands of the China seas, and are sold at from eighty dollars to two hundred dollars per picul! The beche de mar is caught on the coral reefs in the neighborhood of New Guinea, Palawan, Borneo, the north of New Holland, Torres Straits, the Fejee Islands, and,

finally, throughout the eastern islands, where the coral insects breed. The Chinese junks go as far as Java and Borneo for the purpose of fishing for them, and, as the business is accompanied with much hazard and risk, the article is sold very high. Some American and Australian crafts have been engaged in this fishery, and also that of tortoise fishing, for many years, with good profit; but we know of no extension of the trade. The price ranges from eight dollars to one hundred and twenty dollars per picul, according to the size and quality and place of taking. The largest and cleanest are the highest in price. They are prepared for market by *slightly* salting and smoking until they become dry and hard. They are said to be very nutritious as an article of diet. I think if some of our sharp down east people would fit out small brigs for this fishery, *always carrying arms*, it would be a source of much profit to the adventurers. Their voyage could be completed in eighteen months.

If our Western farmers or merchants could afford to ship butter to India at low prices, say at six to eight cents, it would always meet an extensive demand there, as the consumption, under the name of *ghee*, is very great. The price realized in India for an article such as is made for these prices, (it should be sweet, and if a little oily does not matter,) would be from eleven to fifteen cents per pound.

The Chinese are large consumers of pork, lard, and oil. If we can afford these articles at low prices, it might hold out inducements for them to purchase, but not without. Probably New South Wales will have the monopoly of these articles in the Chinese market, if they should become large consumers, as provisions are sold very cheap there now. Our lard oil might find a good market if sold low, but I have very little knowledge on this subject. New South Wales will be a keen competitor with other countries in a few years for articles for the Indian and Chinese markets which Western countries have heretofore furnished. If they can sell their copper cheap it will be used very extensively in India and China, and affect the value of our new copper mines in Wisconsin and Iowa. Copper obtains a very great consumption throughout the Eastern world.

Hoping you may be able to cull some usefnl hints from these lengthy remarks, I have the honor to subscribe myself your obedient servant,

HENRY T. JOHNSON.

To Francis Markoe, Jr., Esq.,
Corresponding Secretary National Institute, Washington.

LETTER FROM SURGEON GENERAL LAWSON,

Presenting to the National Institute a valuable collection of the birds of the United States, in the name of Dr. E. H. Abadie, U. S. A., by whom they were collected and prepared.

Surgeon General's Office, Washington, *May* 11, 1846.

Sir: Under the discretion conferred upon me by Assistant Surgeon E. H. Abadie of the army, who lately forwarded to this office a collection of the birds of the United States prepared by himself, "either to form the nucleus of a cabinet for the Medical Department of the Army," or to be presented "in the name of the Medical Department of the Army to the National Institute or to any other scientific institution," I beg leave to offer them to the National Institute.

From the enclosed list you will perceive, that the cabinet consists of nearly two hundred and fifty specimens, all, I believe, in a pretty fair state of preservation.

In presenting this valuable collection of birds to the National Institute, I cannot do better than to accompany it with the communication of Doctor Abadie to myself, in which he so handsomely surrenders into my hands for the benefit of the public, the fruits of his industry and care for many years.

I have the honor to be, very respectfully, your obedient servant,

THOMAS LAWSON, *Surgeon General.*

Francis Markoe, Jr., Esq.,
Corresponding Secretary of National Institute, Washington City.

DR. ABADIE'S LETTER.

FORT MIFFLIN, PENNSYLVANIA, *August* 8, 1845.

SIR: Herewith I enclose a correct list of the collection of birds I tendered to you last fall, which you did me the honor to accept; either to form the nucleus of a cabinet for the Medical Department of the Army, or to be disposed of as you may deem it expedient, by presenting it in the name of the Medical Department to the National Institute, or to any other scientific institution you may prefer.

I regret very much, that during my long absence from home, what was a very complete collection of the birds of the United States, should, from want of proper care and attention have been reduced to some two hundred species only: fortunately, many very rare species have escaped destruction, viz: the Carracara Eagle, male and female, Florida Jay, Canada Jay, Cliff Swallow, a new species of Tyrant Fly-catcher, Ibis Fusca, Brown Crane, Spoonbill, Darter, Guillemot, Petrel, &c., &c.

I have retained, thus long, the list, for the purpose of availing myself of opportunities afforded here to replace some specimens, or to renew such as were not as good preparations as I could have wished: I will continue to do so in order to make the collection a complete one.

I would call your attention to a curious preparation accompanying the "Whistling Swan" of its sternum, showing the singular manner in which the trachea after reaching it, dips between the lamina of the bone, which separate to receive it; making a turn upon itself near the enciforms cartilage, it returns to the entering point and goes to be distributed in the usual manner to the lungs. Thus more than a third of the trachea is actually contained within the sternum, the external coat of the trachea being continuous with the internal periostium of the bone.

The birds are accurately labelled with the English and Latin names; they are securely packed in two boxes, ready to be shipped through whatever channel you may please to indicate.

I have the honor to be, very respectfully, your most obedient servant,

E. H. ABADIE, *Assistant Surgeon, U. S. A.*

THOMAS LAWSON, M. D.,
Surgeon General U. S. A., Washington City, D. C.

LIST OF NORTH AMERICAN BIRDS.

Arranged in accordance with the nomenclature of C. L. Bonaparte.

ORDER 1.—ACCIPITRES.

Family Rapaces.

2 Caracara Eagle, male and female, Polyborus braziliensis, Audubon.
1 Great Footed Hawk, Falco peregrinus.
1 American Sparrow Hawk, (male,) Falco sparverius.
1 Pigeon Hawk, Falco columbarius.
1 Broad-winged Hawk, (female,) Falco pennsylvanicus.
1 Black Hawk, (female,) Falco niger, Sancti johannis.
1 Winter Falcon, Falco hyemalis.
1 Red-shouldered Hawk, (young, male of above,) Falco hyemalis.
1 Marsh Hawk, (female,) Falco cyaneus.
1 Slate colored Hawk, (female,) Falco velox.
1 Mottled Owl, Strix asio.
1 Great Horned Owl, Strix virginianus.
1 Short Eared Owl, (female,) Strix brachyotos.
1 Barred Owl, Strix nebulosa.
1 White or Barn Owl, (female,) Strix flammea.

ORDER 2.—PASSERES.

1 Carolina Parrot, Psittacus carolinensis.
1 Yellow-billed Cuckoo, Coccyzus americanus.

1 Black-billed Cuckoo, Coccyzus erythrophthalmus.
1 Ivory-billed Woodpecker, Picus principalis.
1 Pilrated Woodpecker, Picus pilratus.
1 Yellow bellied Woodpecker, Picus varius.
1 Downy Woodpecker, (female,) Picus pubescens.
2 Belted Kingfisher, Alcedo alcyon.
2 Meadow Lark, Sturnus ludovicianus.
1 Baltimore Oriole, Icterus baltimore.
1 Orchard Oriole, 2d year, Icterus spurius.
1 Orchard Oriole, 4th year, Icterus spurius.
1 Red-winged Starling, (male,) Icterus phœniceus.
2 Yellow-headed Troopial, (male and female,) Icterus xanthocephalus.
2 Cow Bunting, Icterus pecoris.
1 Rice Bunting, Icterus agripennis.
1 Rice Bunting, changing from winter to summer plumage.
1 Purple Grakle, Quiscalus versicolor.
1 Rusty Grakle, Quiscalus ferrugineus.
2 Crow, Corvus corone.
1 Magpie, Corvus pica.
1 Blue Jay, Corvus cristatus.
1 Florida Jay, Corvus floridanus.
1 Canada Jay, Corvus canadensis.
1 Cedar Bird, Bombycilla carolinensis.
1 Chuckwill's Widow, Caprimulgus carolinensis.
1 Chimney Swallow, Cypsetus pelasgius.
1 Purple Martin, (female,) Hirundo purpurea.
2 Barn Swallow, Hirundo rufa.
1 Barn Swallow, turned white, probably by age.
2 Fulvous or Cliff Swallow, (male and female,) Hirundo fulva.
2 White bellied Swallow, Hirundo bicolor.
1 Bank Swallow, Hirundo riparia.
1 Tyrant Flycatcher, Muscicapa tyrannus.
2 Great Crested Flycatcher, Muscicapa crinita.
1 Large Tyrant Flycatcher, killed at Tampa Bay, Florida, where it breeds, A nondescript.
1 Pewit Flycatcher, Muscicapa fusca.
1 Wood Pewit, Muscipaca virens.
1 Small Green Flycatcher, Muscicapa acadica.
1 American Redstart, Muscicapa ruticilla.
1 Yellow brested Chat, Icteria viridis.
1 Yellow throated Flycatcher, Vireo flavifrons.
1 Solitary Flycatcher, Vireo solitarius.
1 White-eyed Flycatcher, Vireo noveboracensis.
1 Warbling Flycatcher, Vireo Gilvus.
1 Red eyed Flycatcher, Vireo olivaceus.
1 Great American Shrike, Lanius septentrionalis.
1 Mocking Bird, Turdus polyglottus.
1 Cat Bird, Turdus felivox.
1 Robin, Migratory Thrush, Turdus migratorius.
1 Ferruginous Thrush, Turdus rufus.
2 Wood Thrush, Turdus mustelinus.
1 Hermit Thrush, Turdus minor.
1 Golden-crowned Trush, Sylvia aurocapilla.
1 Water Thrush, Sylvia noveboracensis.
1 Yellow Rump Warbler, Sylvia coronata.
1 Yellow Rump Warbler, in winter plumage.
2 Palm Warbler, Sylvia palmarum.
1 Black and Yellow Warbler, Sylvia magnolia, maculosa
1 Cape May Warbler, Sylvia maritima.
2 Canada Flycatcher, Sylvia pardalina.
1 Hooded Flycatcher, Sylvia mitratata.
2 Chesnut Sided Warbler, Sylvia icterocephala.

1 Bay-breasted Warbler, Sylvia castanea.
4 Black poll Warbler, (male and female,) Sylvia striata.
3 Black and White Creper, (male and female,) Sylvia varia.
2 Pine Creeping Warbler, (female,) Sylvia pinus.
1 Hemlock Warbler, Sylvia parus.
1 Prairie Warbler, Sylvia discolor.
1 Blue-eyed Yellow Warbler, Sylvia cretiva.
1 Blue Yellow-backed Warbler, Sylvia americana.
1 Black-throated Blue Warbler, Sylvia canadensis.
1 Maryland Yellow Throat, Sylvia Trichas.
1 Mourning Warbler, Sylvia philadelphia.
1 Pine Swamp Warbler, Sylvia sphagnosa.
2 Cœrulean Warbler, (male and female,) Sylvia azurea.
1 Blue Gray Flycatcher, Sylvia cœrulea.
1 Worm-eating Warbler, Sylvia vermivora.
1 Blue-winged Yellow Warbler, Sylvia solitaria.
1 Nashville Warbler, Sylvia rubricapilla.
1 Blue Bird, Saxicola sialis.
1 Brown Lark, Anthus spinoletta.
1 Ruby Crowned Wren, Regulus calendula.
1 Golden Crested Wren, Regulus cristatus.
1 House Wren, Troglodytes œdon.
2 Winter Wren, Troglodytes europeus.
1 Great Carolina Wren, Troglodytes ludovicianus.
1 Bewick's Wren, Troglodytes bewickii.
2 Marsh Wren, Troglodytes palustris.
1 Brown Creeper, Certhia familiaris.
1 White-breasted Black-capped Nuthatch, Sitta carolinensis.
1 Red-breasted Black-capped Nuthatch, Sitta canadensis.
1 Humming Bird, Trochilus colubris.
1 Black-capped Titmouse, Parus atricapillus.
1 Shore Lark, Alauda alpestris.
1 Snow Bunting, Emberiza nivalis.
2 Scarlet Tanager, (male and female,) Tanagra rubra.
1 Summer Red Bird, Tanagra æstiva.
1 Indigo Bird, Fringilla cyanea.
1 Black-throated Bunting, Fringilla americana.
1 White Crowned Bunting, Fringilla leucophrys.
2 White throated Sparrow, Fringilla pennsylvanica.
1 Bay-winged Bunting, Fringilla graminea.
1 Song Sparrow, Fringilla melodia.
1 Savannah Finch, Fringilla savanna.
1 Snow Bird, Fringilla hyemalis.
2 Yellow-winged Sparrow, Fringilla passerina.
1 Tree Sparrow, Fringilla canadensis.
1 Chipping Sparrow, Fringilla socialis.
2 Swamp Sparrow, Fringilla palustris.
1 Lincoln Pine-wood Finch, Pruccea lincolnii.
2 Pine Finch, Fringilla pinus.
2 Lesser Red Poll, Fringilla linaria.
1 Towhee Bunting, Fringilla erythrophthalma.
1 Cardinal Grosbeak, Fringilla cardinalis.
1 Blue Grosbeak, Fringilla cœrulea.
2 Pine Grosbeak, (female,) Pyrrhula enucleator.
1 American Crossbill, Loxia curvirostra.
1 Rose Breasted Grosbeak, Fringilla ludoviciana.

COLUMBA.

1 Zenaida Dove, Columba zenaida.
1 Carolina Pigeon or Dove, Columba carolinensis.
2 Passenger Pigeon, Columba migratoria.
1 Ground Dove, Columba passerina.

ORDER 3.—GALLINA.

1 Ruffed Grous or Pheasant, Tetrao umbellus.
1 Pinnated Grous, Tetrao cupido.

ORDER 4.—GRALLÆ.

1 Ringed Plover, Charadrius semipalmatus.
2 Ringed Plover, Charadrius melodus.
1 Kildeer Plover, Charadrius vociferus.
1 Black-bellied Plover, Charadrius helveticus.
1 Turn Stone, Strepsilas interpres.
1 Pied Oyster Catcher, Hœmatopus ostralegus.
1 Brown Crane, Grus canadensis.
1 Great White Heron, Ardea alba egretta.
1 Louisiana Heron, Ardea ludoviciana.
1 Yellow Crowned Heron, Ardea violacea.
2 Night Heron, (male and young,) Ardea nycticorax.
1 Blue Crane, Ardea cœrulea.
1 American Bittern, Ardea minor.
1 Green Heron, (young,) Ardea virescens.
3 Least Bittern, (male and female,) Ardea exilis.
1 Ibis Fusca, vel Tantalus Fusca ? Nondescript.
1 Long billed Curlew, Numenius longirostris.
1 Esquimaux Curlew, Numenius hudsonicus.
2 Semipalmated Sandpiper, Tringa semipalmata.
1 Cape Curlew, Tringa subarquata.
1 Red-backed Sandpiper, (Purre of Wilson,) Tringa alpinus.
2 Little Sandpiper, Tringa pusilla.
1 Ruddy Plover, (Sanderling of Wilson,) Tringa arenaria.
1 Semipalmated Snipe, Totanus semipalmatus.
1 Schinz Sandpiper, Tringa schinzii.
1 Yellow-shanks Snipe, Totanus flavipes.
1 Spotted Sandpiper, Totanus macularius.
1 Do. do. young, in summer plumage.
1 Red-breasted Snipe, Scolopax grisea.
1 Snipe, Scolopax wilsonii.
1 Woodcock, Scolopax minor.
1 Clapper Rail, Rallus crepitans.
1 Virginian Rail, Rallus virginianus.
1 Common Rail, Rallus carolinus.
1 Yellow-breasted Rail, Rallus noveboracensis.
1 Great Marbled Godwit, (female,) Limosa fedoa.
1 Common Coot, Fulica atra, Americana.
1 Roseate Spoonbill, Platalea ajaja.

ORDER 5.—ANSERES.

1 Black Skimmer, or Shearwater, (female,) Rhinehops nigra.
1 Great Tern, Sterna hirundo.
2 Lesser Tern, (male and female,) Sterna minuta.
1 Black-headed Gull, Larus atricilla.
1 Common Gull, Larus canus.
1 Herring Gull, Larus argentatus.
1 White-winged Silvery Gull, Larus leucopterus.
1 Black-backed Gull, Larus marinus.
1 Stormy Petrel, Thalassidroma wilsonii.
1 Whistling Swan, Cignus musicus.
2 Pintail Duck, (male and female,) Anas acuta.
1 American Widgeon, Anas americana.
1 Summer or Wood Duck, Anas sponsa.
1 Green-winged Teal, Anas crecca.
1 Scoter Duck, Fuligula nigra.
1 Scaup Duck, Fuligula marila.

1 Tufted Duck, Fuligula rufitorques.
1 Golden Eye, Fuligula elongula.
1 Long-tailed Duck, Fuligula glacialis.
1 Hooded merganser, Mergus cucullatus.
1 Black-bellied Darter, Plotus atringa.
1 Horned Grebe, Podiceps cornutus.
1 Great Northern Diver or Loon, (young,) Colymbus glacialis.
1 Black-throated Diver, (young,) Colymbus arcticus.
1 Red-throated Diver, (young,) Colymbus septentrionalis.
1 Black Guillemot, Uria grylle.
1 Do. do. (young,) described as Uria marmoruta, (Viellot.)

LETTER FROM MR. ROOT, OF MOBILE, ON THE SUBJECT OF AMERICAN SILK.

MOBILE, *June* 20, 1846.

SIR: I received though your kindness twelve seeds of the silk plant, and am happy in saying that I have succeeded in growing six plants. They are now five feet high and in bloom. The plant seems hardy, and is unlike any thing I have met with in our country. The main stem and branches are somewhat like the senna of this region, but the foliage bears no resemblance. J. S. Skinner, esq., editor of the Farmer's Library, saw the plant growing in April, and thought the experiment a very fair one. The seeds were planted in January in pots and slightly forced under glass, and transplanted in May in dry sandy ground, six feet apart.

I shall not fail to send you a portion of the seeds and the silk when at maturity.

Very respectfully, your obedient servant,

CHESTER ROOT.

FRANCIS MARKOE, JR., Esq.,
Corresponding Secretary of the National Institute, Washington.

LETTER FROM HON. RICHARD RUSH, OF PENNSYLVANIA, ON THE SUBJECT OF THE NATIONAL INSTITUTE.

SYDENHAM, NEAR PHILADELPHIA, *July* 18, 1846.

DEAR SIR: Permit me to send you for the National Institute an old folio volume containing bound-up numbers of "The New York Mercury" and "New York Gazette and Weekly Mercury," from 1758 to 1768, the numbers being pretty full for some of the years, though scanty or deficient for others. From its pages may be gleaned items of information not without interest concerning portions of our political history before the Revolution, intermingled with little matters illustrative of habits, manners, and usages in New York and others of the old thirteen States at that colonial day. It is sent in the hope that the Institute will do me the honor to accept it as a slight token of the continued interest I take in its welfare, and of the undiminished gratification I derive from being continued on the list of its corresponding members.

In acknowledging your favor of the 8th instant, conveying a copy of the memorial presented by the Institute to Congress on the 16th of December, I cannot avoid some little expression of the deep regret I feel at the pecuniary embarrassments under which the Institute labors. Had these been brought on by imprudence—had the members or officers been seeking emoluments or pecuniary advantages in any conceivable way for themselves—or had there been any extravagance or waste in managing the concerns of the body, relief could little be expected from the hand of Government. But when nothing of this kind is the case—when all have

been acting without pay or reward, urged on by no feeling but that of doing public good in fields worthy to excite the noblest ambition, and when it has finally become impracticable, by mere private contributions and taxes, to pay even the incidental expenses attendant on the preservation of large collections of curious and valuable things connected with the advancement of science, literature, and the arts, which have come to the hands of the Institute, it is very lamentable to reflect upon its pecuniary embarrassments. Inexpressibly painful is it to know that the recent magnificent presents from the King of the French and the British Government—the latter consisting of the splendid and costly maps and sections of the geological survey of Great Britain and Ireland, which have been and will hereafter be published—with difficulty reach the Institute, for the want of funds to pay for their transportation.

Thus the merit of the Institute is turned to its misfortune! Unhappy anomaly! It has to pay the penalty of early and triumphant success! By its voluntary zeal—by its untiring and well-directed industry in the fields of science, literature, and the arts, it wins a name throughout the world. Distinguished individuals, ancient and learned societies in foreign countries and our own, hail with delight this new association which has suddenly sprung up in the metropolis of the New World. All seem anxious to welcome it into the brotherhood of science. Numerous testimonials of co-operation and sympathy, in the form of instructive correspondence, and in other forms substantial and gratifying, pour in upon it from all quarters, until already the heads of great nations deem it worthy of their marked attention and favor; yet the very donations to subserve the ends of its establishment, and which its own honorable and unaided exertions have so speedily earned, cannot be obtained through its want of even moderate funds.

And can it be that Congress will remain insensible to its wants—suffer it to languish, even to perish, under its extraordinary merits? Let us hope otherwise. The spirit of the age stands up for such an institution. Duties of high and inextinguishable obligation plead its cause. These, let us believe, are only required to be brought under the decided notice of Congress to be effectively recognised; for, consider the strong moral links between nations which fellowship in letters creates; consider how beneficent its influences—how it tends to soften political animosity—to re-enforce the ties which grow upon commercial intercourse and other material interests among nations, and to elevate and refine them. It cannot be that Congress will remain insensible to such considerations, when a very small appropriation of money would satisfy them—so small as not to be felt, even under the heavy calls which war makes. These, however great, need not bear down a minimum call for an object tending, indirectly, even to peace itself, amidst other inappreciable blessings. And least of all need Congress hesitate when its power is complete over this subject, centreing as it does in the national metropolis, and when the scientific collections are for national use, and when the title of them is intended to be vested in the Government as its own property. There would even be a moral beauty in rescuing a small sum for so saving and beneficent a purpose, in the midst of that devouring appetite for the treasury which the national honor demands should be appeased when war rages.

We read of an ancient king who hired a person to tell him every day of his faults. Having no king with us, the collective nation is as the sovereign, and praised in like superlatives, raised still higher by the absence of individuality, which would seem to screen us from flattery. But we forget that the collective nation is, after all, made up of human imperfection; and our national tendency is to self-laudation so uniform, if not excessive, as to be in danger of weakening the sense of our possible failings. We class ourselves with the greatest nations; we would ambitiously be above them—an exalted ambition when properly directed and followed up. But foreign pens and tongues roughly impugn our claims. How is this, and what the mitigation or corrective? All perceive our power—all acknowledge the quick and stupendous creations of our industry—all are struck with the marvellous energies of our freedom. Statistical, incontestible results attest it all. There are no sceptics in these fields. Prone as we may be to set our lights upon a hill, we can hardly exaggerate the mighty whole; or if we do, facts come up to it, grow up to it, whilst we are still speaking, as Burke once said even in reference to our colonial state seventy years ago. So active, incessant, and vast is the principle of

growth in our nation in all things, external and palpable, that the setting sun of every evening must behold it more powerful than when it rose.

But is it that we attend to these material results too exclusively, leaving MIND to shift for itself?—so that in the cultivation which it proudly seeks it has not fair play, from wanting those auxiliary means and appliances which it often requires, and without which, if mind does not sink, it may pine and fail to reach the towering heights its aspirations are fixed upon? And is it that little boons are withheld from it through that political vehemence and intensity which our admirable institutions, in the midst of their excellence, primarily beget, and which tend to absorb all else in that one grand heated vortex? This is to be feared, and is a danger to which the broad forecast of our legislators should look. The topic might become fruitful of both facts and reflections, but I confine myself to narrow limits. We can be roused to patriotic indignation—half the nation, all our presses, can be roused by an objugatory article in a foreign review, or a paragraph in the London Times; but we can be cold under the obligations we contracted as a nation in accepting Mr. Smithson's legacy. We can suffer his half million of dollars to lie dead in our hands for years and years, with his solemn will recorded on our archives. Alas for this fact! It neither stings nor rouses us. There is no political, no party excitement in it. But it is the more painful to dwell upon; and in the *principle* of such neglect there is a silent potency of reproach and mischief which not the marvellous increase of our population, nor the prodigious and universal accumulations of our thrift, nor all the incontestible evidences of our power, nor the victories of our gallant Taylor, can adequately counteract the workings of upon national character. Is it because that legacy was pledged to the interests of *mind* that all our sensibilities are so dead? And are we going, as a nation, to set ourselves against these precious interests, or be content with mediocrity in all that relates to them? In other things we are positively ahead at present; but are we in these? If we never desire to be, let us begin by burning poor Smithson in effigy in the rotunda of the capitol, with an ihkhorn round his neck—knocking the National Institute in the head outright, tumbling its collections from the national edifice where they have hitherto been deposited into the street, and above all, by obliterating from its records the names of all those high functionaries of our Government under whose sanction and auspices it was first ushered into being and introduced to the scientific world of all nations.

But I earnestly desire to give way to other hopes and expectations. In this spirit, for one I should say, as I think, that the opportunities of making known in other parts of the world the intellectual advancement existing in this country which this Institute, if only moderately aided by the Government, would afford, as well as of augmenting our own intellectual stores at the capital of the Union, thence to be disseminated throughout its borders, which the same small help extended to it would also enable it to effectuate, would do more towards creating and keeping alive just and favorable opinions of us with the wise, the learned, and the enlightened abroad, than any other national manifestation we could make. Political power, with all the respect which, under some views, it must command, and with the dread which, when formidable, it can inspire, is not necessarily linked to eminence in science, letters, and the arts, or with that social superiority, their glorious product, and humanizing as glorious, which has ever given to nations their highest contemporary splendor, and conferred upon them the most durable and enviable renown.

With this truth standing out in history, I sincerely wish that Congress may grant the Institute the small relief it seeks, and I will not part from the hope that it will. In which feeling I pray you, my dear sir, to believe me, with great cordiality and respect, your very faithful servant,

RICHARD RUSH.

FRANCIS MARKOE, JR., Esq.,
Corresponding Secretary of the National Institute, Washington.

LETTER FROM THE HON. J. Y. MASON, SECRETARY OF THE NAVY,

Communicating the report of Mr. Reinhardt, the naturalist who sailed in the United States ship Constitution, and presenting eleven boxes of objects of natural history, &c., &c., collected during the cruise, for the National Institute.

NAVY DEPARTMENT, *October* 14, 1846.

SIR: During the recent cruise of the United States frigate Constitution, Captain Percival, along the east coast of Africa, and in the Indian and China seas, she was accompanied by Dr. J. C. Reinhardt, who gave much time and attention in making observations and collecting specimens in natural history for the benefit of the National Institute. I have now the pleasure to enclose to you his report.

In communicating this report to the department, Captain Percival testifies in the strongest language to the devoted interest which was manifested by its author throughout the voyage in his favorite pursuit, and earnestly recommends him as a most suitable person to procure any seeds and specimens of natural history which may be desired from Brazil.

Dr. Reinhardt joined the Constitution at Rio Janeiro, where he was compelled by circumstances of a private nature to leave her on her return, and he will therefore have no opportunity at present, to confer personally with any officer of the Institute in reference to the collections which he was enabled to make during his cruise.

These collections are contained in eleven boxes, which are now in Boston. They will be transported at an early day to this city, and placed in charge of the National Institute.

I am, sir, respectfully, your obedient servant,

J. Y. MASON.

FRANCIS MARKOE, JR., Esq.,
Corresponding Secretary of the National Institute for the Promotion of Science and the Useful Arts, Washington.

REPORT OF J. C. REINHARDT, NATURALIST.

U. S. FRIGATE CONSTITUTION, *August* 5, 1846.

SIR: I have hereby the honor to forward the accompanying report of the observations and collections in Natural History, made up to the present date, as also to present some ideas which have suggested themselves to me, relative to the capabilities of different ports to supply the wants of vessels of our country trading in the eastern seas. You will also meet with some suggestions which I would respectfully submit to your consideration, relative to the introduction of some plants with which we have met, into the United States, where the climate would be favorable to their growth and propagation, and from the cultivation of which, advantage might accrue to our country. Also in relation to some ports, more particularly St. Augustin Bay, where many of our vessels, particularly whalers, are wont to touch for fresh water and refreshments, I have advised the introduction of some fruit trees which they have not at present, and the advantages which would accrue could not fail to be great, and would be felt principally by our countrymen who after long cruises off the cape and in the channel, resort there, where the supplies which can be procured are very cheap, and where they are free from port charges while refitting and invigorating their crews.

Many of the countries, the ports of which we visited, (being the first time for an American man-of-war,) are inhabited by savage tribes who are frequently at war with each other, and you therefore thought proper not to permit me to go far from the shore, as it would endanger life, or might detain the vessel. Indeed the little time which can be spent in port by a vessel of war, when many distant places are

to be visited, precludes the possibility of obtaining much information of the country or its productions, especially when the language is not understood.

In Borneo I could not remain three hours on shore, but as the Rajah of that city had disposed of the exclusive right of obtaining coal to the English, it could only have been of interest to science to have remained there longer.

In China, the restrictive laws imposed upon foreigners prevented me from visiting the country or even all parts of the city. I could therefore only employ a Chinese to go in the country and obtain such objects as might be of interest. In this manner I obtained many seeds, which will be sent to many parts of the United States, and I hope will be of advantage to the agricultural interests of our country. Under such disadvantages to my vocation, I could only make inquiries into the manufactures, exports and imports, their prices, &c.

From the long indisposition with which I was afflicted from that scourge of the east, (Asiatic dysentery,) many of the specimens I had collected were destroyed by the mice and cockroaches, with which the vessel was much infested; and many of the prepared plants were destroyed from mould, caused by the dampness of the climate; but these accidents are always met with on board vessels, where it is impossible to have the means of preservation that may be resorted to on shore.

J. C. REINHARDT, *Naturalist.*

To Captain JOHN PERCIVAL,
Commanding U. S. Frigate Constitution.

October, 1844.—The landscape in the vicinity of St. Augustin Bay, Madagascar, has nothing in appearance tropical, but resembles more, at this season of the year, the opening of spring in a temperate climate. This is caused by the long drought which occurs in the dry season, when the trees and shrubs on the mountains, where the soil is shallow, shed their leaves, while those which grow along the river bottom remain verdant throughout the year. The same cause for the falling of leaves, I have observed in temperate climates, where there was but a slight soil on the mountains, when after a drought the leaves fall from the trees, long before the frost nipped those that grew in a more favorable situation and supplied with more moisture.

There is an entire absence of palm-trees here, which gives the peculiar tropical character to a country, and renders it apparent.

The most conspicuous tree to the view here, growing along the river and low grounds is the tamarind, which grows very abundantly on the western coast, but is said not to be found on the eastern. It is, perhaps, the most important of all the trees found here, to the inhabitants, as they make a large use of the fruit as food. It is possessed of important anti-scorbutic properties, allays thirst, is nutritive, refrigerant, and in full doses laxative. It is well adapted for febrile and inflammatory cases in general. In the former it is often given with the double purpose of acting as a refrigerant and operating gently on the bowels. An infusion of tamarinds forms a very cooling and pleasant drink, as does also tamarind whey.

The fruit has been analyzed by Vanquelin, and found to contain citric, tartaric, and malic acids, with bitartrate of potash, sugar, gum, and vegetable jelly.

There are two varieties, which are considered by Roxburgh and Decandolle to be distinct species. The only difference between them is in the pod. This is the species called Tamarindus Indicus by Decandolle, and has the legume elongated, six or more times longer than broad, and six to twelve seeded, whilst the West Indian variety has the legume abbreviated, scarcely three times longer than broad, and one to four seeded.

This tree is generally found along the banks of rivers or moist places, where alone it naturally grows. While on the mountains at St. Augustin Bay I was very much oppressed with thirst, when observing a tamarind tree growing in a ravine, with a species of scirpus, I took the hint that there might be water near, or these two members of the vegetable kingdom would not have been found there. After a search under the dried leaves near the base of the tree I found a small quantity of water contained in a rock, and from appearance, indicated that there

had been a spring there some time before, and that the soil was still damp. The natural vegetation is thus frequently a certain indication of water, and is well worthy the attention of persons who traverse uncultivated countries, where they frequently suffer excessively from thirst, as in the traffic which is annually carried on between Independence, in Missouri, and Sante Fe, in Mexico, where it is necessary to pass through regions but scantily supplied with water.

There is a large tree growing very abundantly along the river at St. Augustin Bay, and also on the islands near Mozambique. The botanical relations of this tree I have not yet determined, not having been able to procure either flower or fruit. It is a large tree, the trunk generally inclined, with a smooth, slightly rugose bark. The leaves are opposite, slender-ovate, tapering to each end, glaucus beneath, dark green above, midrib distinct, petiole short. The wood is heavy, difficult to split, and the fibres cross each other in a very regular diagonal manner.

As no other tree is known to botanists in which the fibres of the wood are disposed in this manner, except the Guiacum officinale, this probably, also, may belong to the same natural family Tygophylleae.

Should this wood prove valuable in cabinet work, any demand might almost be supplied here.

On the long extent of shingle which stretches south of the river is found a tree which belongs to the genus Euphorbia, which furnishes a notable quantity of caoutchouc. It is very abundant, and the gum appears to be used by the natives, but for what purpose, I could not ascertain.

The mountains here furnish an abundance of lichen, the Rocella tinctoria, which is also largely obtained at the Canaries, Azores, and on the western coast of Africa, together with another species, the fuciformis. In 1840, four thousand one hundred and seventy-five hundred weight of this moss was imported into England. The latter species is sometimes called in commerce "Madeira-weed." It is distinguished from the Rocella tinctoria by its large size, its paler color, and its broader flat fronds.

It has been analyzed by Essenbeck, who found it to contain a brown resin, wax, glutinous matter, chloride of sodium, tartrate and oxalate of lime. If digested in a weak solution of ammonia in a corked phial, at a heat not exceeding one hundred and thirty degrees, the plant yields a rich violet red color. Formerly litmus was prepared from this plant, but now it is obtained from the Leconora tartarea. At present the substance called orchil or archil, of which there is the blue and red, is the only coloring matter prepared from this lichen. Blue orchil is procured by steeping the lichen in an ammoniacal solution in a covered vessel. Red orchil is made with the same liquor in common earthen jars placed in a room heated by steam. It is employed for coloring, dyeing, and staining.

The excessive aridity of these mountains during a great part of the year, is highly favorable to the growth of this lichen, as it is never developed in damp places, groves, or situations deprived of intense light and heat.

The French of the island of Bourbon are at present engaged in the trade; from that island it is exported to France.

The natives here were using a kind of gum as food, which in appearance and form seems identical with gum senegal. It is of a reddish color, in large tears, more difficult to break than gum arabic, and the fracture is more conchoidal. The principal difference between this gum and gum arabic is, it contains more soluble gum and less water and ashes in analysis. The tree which yields this gum was not growing immediately on the coast, and I was therefore unable to ascertain what tree produced it. From the manner in which it was used, I presume it is abundant.

The articles cultivated here by the natives consist principally of rice, corn, pumpkins, sweet-potatoes, a large bean similar to the lima, and a small quantity of cotton of an inferior quality, which is spun into yarn by the females, dyed with the bark of the Rhyzophorea ovata, and woven into a coarse cloth.

The cattle are of the kind designated as the Bos Indicus, and are peculiar in having a large protuberance of fat immediately over their withers.

The sheep are supposed to be aboriginal, and are covered with coarse hair, instead of wool. The ears are pendulous and the tails are very large, weighing from ten to twenty pounds, being composed of a mass of fat.

Goats are also abundant.

A large land tortoise is found on the mountains, some having the weight of thirty pounds. I also found a smaller kind weighing three or four pounds. Both kinds were excellent as food. They belong to different genera: the former to Testudo, the latter to Pyxis.

The vegetables and animals being purchased at a low price, and fresh water being easily obtained a short distance up the river with little labor, has caused this port to be much frequented by whalers and ships going to the East Indies when in want of provisions.

It would certainly be a great advantage to persons navigating the seas, and particularly to those engaged in the whaling trade, to have the orange, banana, cocoa-nut, pine-apple, and other tropical fruits introduced here, which are so essential to health in tropical climates. Those fruits no doubt would flourish here, the climate and soil appearing very propitious, and the inhabitants are disposed to cultivation. It would be preferable to have them introduced from the Brazils, as the fruit of South America is much superior to that found on the eastern coast of Africa.

The geological character of this vast island is yet but imperfectly known. The Europeans who have resided in the interior describe the formations as principally primitive, and containing ores of the more important metals used in the arts. Of these, the most abundant are iron and copper, the ores of the former being very rich, and the only one of which the inhabitants have the knowledge of smelting. The cliffs of St. Augustin Bay are four or five hundred feet high, and are composed of a secondary limestone of not very ancient date. The strata are nearly horizontal; the inferior consists of a coarse conglomerate largely intermixed with a ferruginous sand, which readily decomposes and yields to the force of the breakers. The superior strata of a firm white fine grained limestone, which would give excellent lime. From the terraced manner of the rocks, and their perforation by shells, now several feet above high tide, it is evident that there is a gradual upheaving of the land here. No trace of ore has been discovered in this part of the island, but it is probable that coal may exist between the secondary formations here and those of the primitive of the opposite coast. The natives here manufacture spears, but the iron they obtain principally from whale ships.

October, 1844.—The exceedingly short stay at Mozambique caused the observations and collections to be but few. The island of ————, in the harbor of Mozambique, is elevated about fifteen feet above high tide, and has sufficient soil in some places to support large trees. The rock on which it is based is a conglomerated carbonate of lime formed of comminuted coral, madrepore shells, &c. The rock disintegrates very readily from the waves striking against the base, forming large caverns, which in time become unsupported and fall in, and thus the island at present is much smaller than formerly.

Near the northern part of the island the water is very shallow, and the bottom is an entire bed of coral, upon which are found several species of asteria, echina, shells, and many other marine productions.

Upon the island there grows in great abundance a species of salicarea and dioscorea; also the tree mentioned as growing at St. Augustin Bay is also found here. A small tree, native here, a species of acaccia, is planted in the city in yards as a shade tree. The plant called Argemene Mexicana is growing abundantly in the streets of the city, and no doubt was introduced by the Portuguese. This plant has a very wide distribution, being found in the United States, Mexico, West Indies, Brazil, Africa, and India. Its medicinal properties are much esteemed in different countries. In the West Indies the seeds are used as a substitute for ipecacuanha. In Brazil it is called cardo santo, and the juice is there administered to persons bitten by serpents. In India it is used in opthalmia, being dropped into the eye; and it is also used in venereal diseases. Ainsle says, it is purgative and deobstruent.

Several trees of the Ficus Indica were growing in the city.

But few vegetables, &c., could be obtained here, consisting of a few oranges, bananas, cocoa-nuts, mandioc, and cabbage, all of very inferior quality.

A small quantity of Mocha coffee is cultivated here, for which was asked thirty three cents per pound. I was informed that a small quantity of gold dust was brought to market here, also a small quantity of ivory. The chief market for these

articles at present in the Portuguese possessions on this coast, is at Sofala. The chief commodities given in exchange for ivory and gold dust are large brass rings, and coarse colored calicoes, blue and red colors being preferred. The rings are made of round bar brass of an inch diameter, and the ring thus made being six or eight inches diameter. They are not welded, and worn around the neck. Smaller ones are worn on the ankles and wrists. Formerly there was, on an average, ten thousand slaves exported from this place annually, and the slave trade is still probably carried on to a small extent, but all commerce appears declining, and at present not more than two hundred Europeans remain. During the spring months of the northern hemisphere, this place is said to be very unhealthy, and is probably caused by a large extent of ground which is left uncovered by water when the tide ebbs, and from which a very disagreeable smell emanates.

November, 1844.—The immediate vicinity of Bembetooka bay presents comparatively little to the botanist for a tropical country, and although the ground is parched in the same manner as the neighborhood of St. Augustin bay, yet it has a very different aspect; for here near the village may be seen the mango, cocoa-nut, banana, and orange tree, although, from appearance, the two latter have been but lately introduced. The opposite side of the bay has apparently a much better soil, and denser vegetation, but is inhabited by the Sackalavas, who are at present hostile with the Hoovas, so that in consequence of this circumstance and the distance, I found it impracticable to visit it. I regretted this the more, as the silk worm is reared there, and is said to be very different from the European varieties, being much larger and covered with hair, and are said to be fed on a kind of pea. I saw none of the silk fabric produced from this worm, and consequently am unable to compare it with the kind produced in the United States; but I think the subject merits attention, as there can be no doubt but that in a few years silk will form one of our staple productions, for even in Pennsylvania, at present, nothing repays the careful cultivator so well in proportion to the extent of ground tilled as this branch of industry, and much more so will it be in the southern States when properly understood, where the climate is much more congenial.

The Datura stramonium is seen growing in the streets of Bembetooka, and no doubt has been introduced by the Arabs, who have had considerable trade with this port.

The Euphorbia splendida is cultivated in the village for hedges, and although a large shrub, it is not well adapted for this purpose, having no thorns or asperities. The buds on this shrub were just beginning to burst, in consequence of a slight shower of rain which had fallen, and denoted the commencement of the rainy season.

A tree found abundantly on the small stony hills in the vicinity of the town, resembling an ash in habit, but belonging to the Leguminosa, yields a gum in properties identical with gum sulo. I obtained seed of this tree in a good state, and I think it may bear the climate of our southern country.

In the small groves which are situated at the base of some of the small hills, will frequently be found the tangena, (Tanghinia venemflua,) a pentandrous shrub, having a white flower. The corolla is tubular, five cleft, with the divisions somewhat reflexed, the leaves are lance ob-ovate, accuminate and slightly revolute on the margin. Petiole short, fruit adrupe.

The fruit of this plant appears to be a violent emetic, and is frequently used by the officers of justice in this kingdom, as an ordeal to ascertain the guilt or innocence of suspected criminals, where the evidence is not clear. The criminal is made to swallow three pieces of skin of a black fowl, when a copious decoction of the fruit of this plant is given, which produces violent emesis, and if the three pieces of skin are ejected, the prisoner is declared innocent; but should any remain, he suffers the penalty of the crime of which he is accused, and which frequently, for the most trivial offence, is death. It is very probable this plant would possess medical properties if it were properly investigated.

I obtained here two varieties of indigo seed, the coloring matter of which the natives use in dyeing their cloth, and a piece which has been the labor of three weeks they eagerly sell for one dollar.

The Hymenora verrucosa grows only in the interior, and produces gum copal, of which there are two kinds brought to market at this port, one kind, called "Jack-

ass copal," is much inferior to the other in not drying so readily. It is very probable that they are the produce of different trees.

A large tree, the Chrysophia faciculata, is much valued by the natives for the timber, of which they construct their canoes. It is also the principal timber used in building their proahs at this port.

A species of Adansonia is found very abundant on this coast.

Canes made of the Dyospyrus ebenaster were exposed for sale here, and the natives informed me that this wood was very abundant in the interior.

The bark of a species of Hibusscus is used here for making coarse cordage.

Two species of Pandamus or Screwpine is found here—the Pandamus hofa and the Pandamus sylvestris. The seed of some species can be eaten. The stem is remarkable for sending down aerial roots.

Among other plants found here, the more remarkable are the Urania speciosa, Cassurina equesitifolia, Urtica fatiatis, Barringtonia speciosa, two species of Bignonia, Mirnosa madagascar, &c.

But little fruit could be obtained here, consisting of a few bananas and cocoa-nuts. The water is not good, being obtained from wells fifteen or twenty feet deep, in which the water rises and falls with the tide.

Many of the small hills in the vicinity of Majunga are composed of a ferruginous sand, and incapable of being cultivated, although between these very frequently is a small extent of alluvial soil, which is generally cultivated with rice, and which is flooded with water at times, may be the cause of the fever which prevails here at times, and proves very fatal to foreigners, as also to natives from the interior. It is a highly inflammatory remittent fever at first, but soon passes into the continued form with typhoid characters, coma, &c.

Mr. Marks, an American, who has resided here several years, engaged in mercantile business, informed me that he has had but one attack of fever, and it appears from the experience of others also, that after recovering fully from the first attack the chances are much less of taking it again.

The cliffs at the entrance of the bay are low, the lower strata being composed of fossiliferous carbonate of lime, the strata alternating with a finer carbonate containing but few fossils. Occasionally there is a stratum of a very pure clay interposed. The strata is nearly horizontal.

The soil is largely impregnated with oxide of iron, so much so at some places, as to give it a dark red color. I found in the village a specimen of serpentine containing a large quantity of chromate of iron, but its locality I could not determine. It is said here that the natives in the interior find native steel, but it is most probably meteoric iron, as that is capable of being wrought without undergoing any process, and is harder than common iron.

Since the government has been usurped by the present Queen, great exertions have been used to check the progress of the christian religion, which had been extensively promulgated by English missionaries during a term of ten years, which grant they received from King Radama to reside that length of time on the island, establish schools, and instruct the natives in the mechanic arts. Some time after the death of Radama, several hundred natives having been converted to the christian faith, it became obnoxious to the Queen and her officers, and the penalty of death was imposed upon all those who would not renounce their new faith. Many suffered death, some in the most cruel manner; and it appears the persecution still continues, as the Governor's secretary, who accompanied me one day as a guide in this neighborhood, informed me that he had been educated at the capital by the English missionaries, and that his brother had lately been put to death near the capital, for having been discovered praying and having religious books in his possession. This person informed me that he believed in the christian faith, but was obliged to conceal his books, and to profess the religion of the country.

The geological formation of Noos Beh, Madagascar, is of volcanic formation of ancient date. Many of the bare rounded hills still present the forms of craters. A large deposit of chert flanks the base of one of the hills, dipping at an angle of 35°; and several dykes of a very compact sandstone, evidently in a state of fusion once from its highly crystallized structure, traverse the chert.

Immense blocks of granite are strewn along the shore. The loftiest peak of the surrounding hills is perhaps five hundred feet, and is covered with large timber, which affords some valuable woods. A large portion of the timber has been cut off

on that side next to the bay, and is now under cultivation by the natives, large patches of which have been planted with the banana, (which has been introduced by the French,) and in the course of a few years will render this fruit abundant here. There is a native pepper (capsicum) much cultivated here. The bushes of the shore are covered with a beautiful species of twining convolvulus. A species of euphorbia, apparently identical with hypericifolia, is used by the natives in decoctions for the cure of venereal diseases. This plant is found abundantly in the United States, and is supposed by many agriculturists to be the cause of the salivation of horses while in pasture.

The harbor being easy of access, the water very good and abundant, running from the mountain in several streams, induces many of our whale ships to visit this port.

The inhabitants of Madagascar do not appear to have had their origin from one source, but appear to have descended from the Ethiopian, Malay, and Hindoo, and at present form a number of distinct tribes, differing also in many respects from each other, though nominally comprised in one political empire.

The distinction most strongly marked is that of color, and this, although producing slight variations in each tribe, separates the population in two great classes, and is supposed by some to allow of its being traced to only two sources, viz: the Malay, distinguished by a slight, well formed person, fair complexion, and straight hair; the Ethiopian, more robust and dark colored, with woolly hair.

But to these two races we must also add the Hindoo, as many individuals are seen that from their features and color must have had their origin, in part, from that race. They may also be said to possess but one language, for an inhabitant from any part of the island may be understood in any other part, but frequently some words are used in some districts which are not found universal. Many Arabic words are also incorporated in the language of some parts of the coast, and have been introduced by the Arabic traders, with whom they have long had intercourse, and have also received some of their religious tenets as well as language. Circumcision is practised universally on the coast.

The language, which is undoubtedly a branch of the Polynesian, is also another proof of the origin of a part of these people, while the unity of the language over the whole island indicates a remote period at which their emigration must have occurred.

November, 1844.—The prospect around the city of Zanzibar, when viewed at the distance of several miles is exceedingly beautiful. The land is elevated along the shore ten or fifteen feet, for the distance of a fourth of a mile interior, which is densely covered with the cocoa-nut tree. The land then rises in gently sloping hills on which are cultivated the clove tree, in beautiful plantations, for several miles. This tree (Caryophyllus aromatica) when young resembles a pear tree somewhat in shape; the bark is smooth and adheres closely to the wood. The leaves when young are reddish on the upper and green on the under side, and the whole plant, like the cinnamon tree, has a strong aromatic odor. When an exotic the tree does not begin to produce until eight or nine years of age, but in its native soil is usually productive at five or six years of age. The buds appear in the beginning of the rainy season, about the first of May, and during the four following months are perfected; but, as with many trees in the tropics, buds, flowers, and fruit may be found upon the tree at the same time. The buds are green at first, then yellow, and finally, when ripe, change to a blood red color soon after the flowers open; and in three weeks the seeds are fully ripe. They are gathered very carefully by the hand and with crooked sticks, in order that the trees may not be injured.

Sir T. Herbert gives the following fanciful description of the buds of the clove: "It blossoms early, but becomes exceedingly inconstant in complexion, from a virgin white varying into other colors, for in the noon it shows a pale green, in the meridian a distempered red, and sets in blackness. The cloves manifest themselves at the extremity of the branches, and in their growing evaporate such sense ravishing odors as if a compendium of nature's sweetest gums were there extracted and united."

They are cured by placing them in hurdles over the fire for a few days, and then exposed to the sun until thoroughly dried. The produce varies in different years;

the average quantity for an orchard is from six to ten pounds for each tree. Some trees have produced, it is said, in their native soil, one hundred and fifty pounds in one season. The ordinary age is about seventy years, but in their native place ninety. In commerce, there are four different varieties of the clove known—the common, the female, the royal, and the wild or rice clove. The two latter are smaller and more scarce than the other kinds. The best cloves are large, heavy, have a hot taste and oily feel. Those which have had the essential oil extracted are shrivelled, and usually want the knob at the top.

The Arabs are increasing their plantations by cutting down the cocoa and bananas trees, and clearing away the natural brushwood and planting this spice-tree, the produce of which, in a few years, no doubt, will be the principal export of this island.

The next most important article of cultivation is the Jatropha manihot, which constitutes a very large part of the food of the inhabitants. It is cultivated in the same manner as in Brazil, but not used so much in the form of flour, and the Tapioca is very seldom extracted. It is very singular that the root in a raw state is a very active poison to the human and animal race, but after being subjected to boiling or dried in the sun until the acrid juice has escaped, it becomes one of the most wholesome and nutritious productions of the vegetable kingdom, and is supposed to furnish nutriment to three-fifths of the human race. The poisonous principle of this root is yet undetermined, but Guibourt thinks it is hydrocyanic acid; if so, it would probably be profitable to extract it, if a proper method was known.

The cocoa-nut tree is also extensively cultivated for food, for the oil which is obtained from the mature fruit for a beverage, and for a spirit obtained from the fermented sap. The oil is obtained by crushing the mature fruit in a wooden mortar, in which a large stick of timber is made to revolve by means of a camel attached to the end of a long lever. The unripe fruit furnishes a very refreshing beverage which may be drank by the most delicate, with perfect impunity, and the immature pulp may be eaten without any danger of exciting those diseases so common in tropical climates. This is one of the few examples in the vegetable kingdom, where a fruit may be eaten or used in any stage of its growth and be nutritious and perfectly innocuous.

The mango tree grows here to a very large size, and bears an abundance of fruit of large size and fine flavor.

The cashew-nut is also very abundant.

The oranges are vastly inferior to those cultivated in Brazil, which, no doubt, is to be attributed to the kind, and not to the climate or soil.

The pine-apple is very abundant, and grows apparently without cultivation.

Bananas and plantains can be obtained in any quantity and of a very good quality, also pumpkins and culinary herbs.

Among the indigenous plants found here, is the Hypoxis erecta, a small grass-like plant, having a yellow flower with six petals, disposed in a star-like manner. This plant grows abundantly in North and South America, and the bulbous root bruised and applied to wounds caused by poisonous serpents is supposed in some parts of the United States to be an effectual remedy.

I observed on the uncultivated grounds of the low extent which borders the bay, the Nauclea gambir, a plant much cultivated in the East Indies, for an astringent extract called catechu, which it produces. I do not know that this plant is cultivated here, but it certainly could be to great advantage, as the specimens I saw were extremely large and flourishing.

In the cultivated fields I saw the papaw, a plant that is common now throughout the tropics, although a native of America. The fruit, when cooked, is much esteemed by some persons, but it appears to have little to recommend it. Its great peculiarities are, that the juice of the unripe fruit is a most powerful and efficient vermifuge: the powder of the seed even answers the same purpose, and that a principal constituent of this juice is fibrine, a principal otherwise supposed to be peculiar to the animal kingdom and to fungi. It is also said by Dr. Lindley and other authors, that this tree has the singular property of rendering the toughest animal substances tender, by causing a separation of the animal fibre; its vapor even does this, for it is said that newly killed meat suspended among the leaves, and even old hogs and old poultry become tender in a few hours, when fed on the leaves and fruit.

Latham's island, situated near the island of Zanzibar, is elevated about fifteen feet above high tide, and contains about twenty acres. It appears to have been a breeding place for birds for many years, and consequently about three-fourths of the surface is covered to the average depth of two feet with the substance called guano, which is the excrement of several species of sea bird, their feathers, and the remains of many that perish. This substance is undoubtedly the richest manure known, being composed of the urate, phosphate, and oxalate of ammonia, oxalate and phosphate of lime, and undetermined organic substances, of which but a small part is soluble in water. These are the principle constituents, according to the analysis of Voeclkel. It is only necessary to add a small quantity of guano to a barren soil, consisting only of clay and sand, to produce a rich crop of corn. Its action by some has been attributed to the organic substances which it contains, and which furnish the nitrogen to the vegetable albumen, which is the principal constituent of plants.

The birds which frequent this island appear to feed their young on the flying-fish. While on the island, I observed several old birds, after flying round in circles for some time, descend where their brood were sitting, so as to touch the ground with their feet but without alighting, and at the same time disgorge several flying fish.

Were there enterprise enough among the Arabs on the island of Zanzibar to import this manure, which is but twenty miles distant, and apply it to the sterile hills on their island, it would render that beautiful spot one of the most productive on the globe, capable of yielding all the tropical productions in the greatest perfection. An English man-of-war has lately been ordered to stop and examine it.

The rock is a calcareous conglomerate, formed of broken shells, corals, &c., cemented by oxide of iron, and is decreasing in size in consequence of the waves of the ocean wearing away the base, when the top, unsupported, falls down. No herbage is found on the island, not even a spear of grass, or no member of the animal kingdom, but birds, which constantly cover about three-fourths of the surface, and so tame that thousands might be killed with a stick.

January, 1845.—Quallah Battoo appears to be on the decline rather than improving either in appearance or importance. This is caused, no doubt, by the feuds and jealousies which exist between petty Rajahs, which, in its consequence, leads to the destruction of much life and property. The town consists of twenty or thirty houses, enclosed within a quadrangular picket fence made of bamboos, which are inserted into the ground and pointed at the top, about eight feet high, having other pieces running in a horizontal manner and tied to the upright sticks with hair, so that it would be but little labor with a large jack-knife, to make an entrance in a few minutes. There are two entrances opposite each other, one facing the shore and just large enough to admit a single person. The houses are small, and situated in the centre of the enclosure, having one principal street, in which fish, fruits, &c., were exposed for sale, forming a kind of bazaar. The comparative abundance of fruits, fish, &c., would appear to show, that the Malays here have turned their attention more to agriculture than their kindred elsewhere. This is probably owing to the extensive cultivation of pepper. The nearest plantations are situated about two miles from town. The cultivation of this spice is between the longitude of 90° to 115°, beyond which no pepper is to be found, and they reach from 5° south latitude to 12° north, where it again ceases.

The species cultivated here is the piper nigrum, although, according to Dr. Roxburgh, the trioicum yields excellent pepper also. The climbing stem is trained on stakes at the distance of about eight feet, and allowed to rise about ten feet high. When any of the berries on a spadix change from green to red, the whole are considered fit for gathering, for if they are allowed to become fully ripe, they are somewhat less acrid, and moreover easily drop off. When collected, they are spread out and dried in the sun, and the stalks separated by hand-rubbing, and they are afterwards winnowed. White pepper is prepared from the soundest and best grains taken at their most perfect stage of maturity. These being soaked in water swell and burst their integuments, which is afterwards carefully separated by drying in the sun, hand-rubbing, and winnowing. Mr. Crawford estimates that fifty millions pounds of pepper are produced annually, and of this amount, the west coast of Sumatra alone supplies twenty millions.

February, 1845.—Singapore is rapidly rising to a large city, and may well be styled the key of the Gulf of Siam and the China Sea. It is situated on an island of an elliptical form, twenty-five to twenty-seven miles in its greatest breadth from north to south, and containing an estimated area of two hundred and seventy square miles, with about fifty small desert isles within ten miles around it, in the adjacent straits, whose area is about sixty miles, the whole settlement embracing a maritime and insular dominion of about one hundred miles in circumference. The island is, on the north, separated from the main land of the Malayan peninsula by a very small strait, which in its narrowest part is not more than a quarter of a mile wide; on the front, and distant about ten miles, is an extensive chain of almost desert isles, the channel between which and Singapore is the grand route of commerce between Europe and America and western Asia. The aspect is low and level, with an extensive chain of saline and fresh water marshes in several parts, covered with lofty timber and luxuriant vegetation, here and there low rounded sand hills, interspersed with spots of level ground, formed of a ferruginous clay with a sandy substratum.

The principal rock is red sand-stone, which changes in some parts to a breccia or conglomerate, containing large fragments and crystals of quartz.

The whole contiguous group of isles, about thirty in number, as well as Singapore, are apparently of a submarine origin, and their evulsion probably of no very distant date.

On several of the small islands of the strait are fine quarries of syenite, which are worked by the Chinese, and used for most of the buildings now being constructed in Singapore.

The town stands on the south coast, on a point of land near the west end of a bay, where there is a salt creek or river navigable for lighters, nearly a mile from the sea; on the east side of the town is a deep inlet for the shelter of native boats. The town consists generally of stone houses of two stories high, but in the suburbs, called Campong Glam, (Campong, Malacca, and Glam, China,) bamboo huts are erected on posts, most of them standing in the stagnant water on the east side of the harbor. Enterprising merchants have erected many substantial and ornamental houses fronting the harbor, and presenting a strange contrast with the wretched tenements of the natives. The ground is generally raised three feet, and they have an elegant entrance by an ascent of granite stairs. The rooms are lofty, with venetian windows down to the floor, and many are furnished in a luxuriant manner, with baths, &c., while the grounds are tastily laid out with shrubs of beautiful foliage, affording a most picturesque prospect from the shipping in the harbor.

On the design of Sir Stanford Raffles, the settlement of Singapore was first formed in February, 1818, and declared a free port in 1819, and its sovereignty, in its present extent, confirmed to Great Britain in 1825, by a convention with the King of Hollan[illegible] and the Malay Princes of Johore. There is, it is said, a pension of $24,000 Spanish, a year, paid by the East India Company to this Rajah as an equivalent for the cession. In 1823, the town consisted of only a few buildings, but it now can boast of the handsomest, most regular, and best built bazaar, it is said, in India. The shops and houses (upper stories) are all pukka, uniform, neat, and respectable, with fine wide streets, and are occupied solely by Chinese, who carry on the business of the place, not excepting commercial speculations, as their houses are full of goods, and they themselves are in a thriving condition.

Singapore was down to the year 1818 a haunt of pirates; no European or native vessels ever visited it, and as late as the year 1810 the boats of the English frigate Greyhound cut out and recaptured from one of the most secure spots of the present harbor a European vessel which had fallen into the hands of the pirates in question.

The population of Singapore is, at present, computed at more than sixty thousand, two-thirds of which are Chinese, and the remainder Malays, Hindoos, and foreigners.

During our stay there of five weeks more than seven thousand Chinese arrived as settlers, but it was the proper season for the arrival of their junks, as they are obliged to come down near the termination of the northeast monsoon, not being able to beat against an adverse wind with their ill constructed vessels. Upwards of forty of these vessels were lying in the harbor, some of six hundred weight tonnage.

Notwithstanding its lowness, marshiness, intertropical position, and consequent high temperature, with a constant and rapid evaporation by a nearly vertical sun, from a rank and luxuriant vegetation and a profusion of animal and vegetable mat-

ter in every stage of putrefaction, it has hitherto proved remarkable for its salubrity, and is much resorted to by invalids from India. Being so near the equator, there is of course little variety of seasons, neither summer nor winter. Fahrenheit ranges from 71° to 89°. The periodical rains are brief, indistinctly marked, and extending over about one hundred and fifty days of the year, and about one hundred inches of rain fall annually. Almost all the tropical fruits are cultivated here, many of which are in great perfection, as the pine-apple, banana, mangosteen, &c. The nutmeg is being extensively cultivated in large plantations, but as yet does not yield a large crop, as the tree requires ten or twelve years from the time of planting for that purpose. They are generally planted on the ferruginous sandy hills, and require an artificial soil and compost to be placed around the roots of the young trees, and it is also necessary to keep them shaded from the sun by mats for three years, and when five years old produce, but it is only when ten or twelve years old that they yield a full crop.

The nutmeg tree (Myristica moschata) in its general appearance resembles the clove tree; the bark is smooth and ash colored, the leaves green above and grey beneath, and if rubbed in the hand, have a gratefully aromatic odor. The sap has the property of staining cloth indelibly. The tree bears fruit, flowers, and buds at the same time. The flower resembles the lilly of the valley very much. The fruit in size and appearance resembles the nectarine, and is marked with a furrow like the peach, and as it ripens has the same delicate blush. The following description by Sir Thomas Herbert is somewhat fanciful and at the same time true. "The nutmeg, like trees most excellent, is not very lofty in height, scarcely rising as high as the cherry, and by some it is resembled to the peach, but varies in form of leaf and grain, and effects more compass. The nut is clothed with a defensive husk like those of a baser quality, and resembles the thick rind of a walnut, but at full ripeness discovers her naked purity, and the mace chastely entwines (with a vermillion blush) her endeared fruit and sister, which hath a thin coat; and both of them breathe out most pleasing smells. The mace in a few days (like choice beauties) by the sun's flames become tawny, yet in that complexion best pleases the rustic gatherer." The plant bears three crops in a year, but the fruit requires nine months to become perfect. The nutmeg has three coverings, which are all of different textures. The fruit is the outside coat, which is about an half inch thick, and when ripe cracks and opens of itself in two parts; the second is the reticulated mace which appears through the fissures of the first, and has a bright scarlet color; the third is a hard black shell, which encloses the nutmeg. Good trees will produce from ten to twelve pounds of nuts and mace annually, but the average of an orchard is sixty-five ounces avoirdupois or about two peculs to an acre. Nutmegs of a lightish grey color, a strong fragrant smell, an aromatic taste, large, oily, and round, and of a fine texture, are the best. The holes made by insects eating into the kernel are often filled up, and can be ascertained by the inferior weight. In commerce, they are divided into royal and green; the former of an oblong shape, and the latter of a round shape. This spice, no doubt, in a few years will be the principal production of this island, and is capable of supplying the whole British Empire.

Another natural production of the island, is the Agar-agar of the Malays, (Fucus sacharinus,) resembling a fern, and abounds on the coral shoals around Singapore, and produces in China from six to eight dollars, in its dry bulky state. By the Chinese, it is converted into glue, paint, &c., for glazing their cottons, and sacrifice paper; the finest portion is made into a rich jelly, which makes a delicious sweetmeat, when preserved in syrup. The harvest of this sea-weed is from six thousand to twelve thousand peculs, annually.

Between the sandy hills is much marshy soil, which formerly was densely covered with timber and jungle; much of this has been cleared and ditched, and the peat, of which there are large quantities, in some places, is thrown in heaps, burned, and serves as a compost. More than a thousand acres of this soil have been planted with the sugar cane, and it is found to yield exceedingly well, the sugar being produced at one cent per pound. The laborers are Chinese and Hindoos, the wages paid are from three to four dollars per month, out of which they find themselves.

An excellent road has been made by government, with convicts from India, across the island, much to the advantage of the agriculturists.

The American consul, Mr. Ballister, who is extensively engaged in manufacturing sugar here, has made an experiment with guano, as a manure for cane, and found it to succeed remarkably well. That which he used was obtained near the island of Pulo Penang, and is said to be much inferior to that obtained in the Pacific.

The cultivation of cotton has been tried here, but does not succeed, the pods not coming to maturity; being previously affected with a fungous decay, which is probably owing to the hygrometrical state of the atmosphere, nearly one hundred inches of rain falling annually, and the variation of the thermometer being but a few degrees during the year. I may remark, also, that I examined some cotton growing in the vicinity of Zanzibar that was affected with disease in the same manner. Indeed, from what I have observed, and from what I could learn from others, I think it extremely improbable that the culture of cotton, in any of the European colonies of the east, will ever sensibly affect that of the United States.

The Uncaria gambier or Nauclea gambier is one of the productions of this island, and is very extensively cultivated in many of the East India islands, particularly Bintang, where there are more than sixty thousand plantations. Gambier is the Malay name for the extract prepared from this plant.

This plant belongs to the natural order Cinchonaceae. It is a scandant shrub, rising to the height of ten to fifteen feet, with round branches, leaves ovate, lanceolate, acute with short petioles smooth on both sides, stipules ovate, peduncles axillary, solitary, opposite, bracteolated about the middle, the lowest one sterile converted into hooked spines. Florets pink and green. Capsules stalked, clavate, two-celled, two-valved.

Two methods are employed in obtaining gambier. One consists in boiling the leaves in the water, and inspissating the decoction; the other, which yields the best gambier, consists in infusing the leaves in warm water, by which a fecula is obtained, which is inspissated by the heat of the sun, and formed into cakes. The method as practised at Singapore consists in plucking the leaves from the prunings, which are boiled in a qualie or cauldron, made of bark, with an iron bottom.

After being boiled twice and rinsed, they are used as manure for the pepper vine. The decoction is evaporated to a very thick extract, of a light yellowish brown color like clay, which is placed in oblong moulds. The pieces thus obtained are formed into squares, and dried in the sun, or on a raised platform. The best is made at Bintang, the next best is that of Lingin.

There are also some plantations of pepper on the island, and also of the betel leaf, which is the piper betel; and a considerable revenue is derived from a small tax on the latter production.

It is as a commercial mart and key to the navigation of the seas in which it is situated, that this settlement is of incalculable importance to the British empire, and that it has sprung up in a few years from a desert isle to a rich and flourishing settlement, importing and exporting more than £3,000,000 worth of goods annually. The opening of the Chinese markets does not appear to have affected it sensibly.

Situated as it is in the centre of myriads of active and industrious nations, inhabiting rich and fertile lands, abounding in every species of tropical produce of which Europe or America or China has need, it will no doubt continue to increase as a depot for the manufactures of Europe and the United States, to an almost illimitable extent; and being unmolested in its progress by harbor duties, dues, or charges of any description, it only requires a liberal policy of England to make this, in the course of time, one of the most important commercial depots in the world.

March, 1845.—The river of Sambas, in the island of Borneo, reaches the coast in latitude 1° 13′ N., longitude 109° 03′ E. The width of the mouth is about half a mile, having two small mountains, situated, one on each side.

That on the south is perhaps four hundred feet high and has the greater elevation. It is cultivated to near the summit by the Chinese, who have a village immediately on the west side, containing perhaps two thousand inhabitants. The other eminence, on the north side, is very densely covered with vegetation, and has an elevation of three hundred feet. The rock of these mountains is chert, and belongs to the unstratified series, with the lines of fracture very distinct.

Ascending the river it takes a northeast course for about half a mile, where it

turns E. N. E., and keeps that general direction, making several small flexures for about twelve miles, where the tributary on which the town of Sambas is situated joins it on the right.

About two miles below the junction of this stream, a small creek enters on the left, which we followed with a small boat, for a distance of perhaps two and a half miles, where a small path led through a marsh covered with high grass (andropogon) for the distance of a quarter of a mile to a Malay village, of perhaps thirty houses, elevated on piles four feet above the marsh. The inhabitants were not to be seen, probably absent fishing, as several nets were drying in the village.

There was a large grove of cocoanut trees, loaded with fruit, some banana trees jack-fruit, bread-fruit, paw-paw, and a small quantity of pepper, which looked unhealthy, as the soil was too moist. The inhabitants of this village subsist principally by fishing, as the soil is unfit for cultivation.

A short distance above this small stream a range of hills is visible, having five elevated points, the nearest distant two miles from the river. The branch on which Sambas is situated has a tortuous course, and is at one place obstructed by rocks; but vessels drawing twelve feet water can pass without difficulty. The village is situated thirty miles from the coast, and contains about ten thousand inhabitants, two-thirds of which are Malays, and the remainder Chinese. This town was burned in 1815 by the English, and taken possession of by the Dutch in 1817, who have it defended by a fort mounting a few guns, with about eighty soldiers, principally Javanese, who are preferred by the Dutch to the Malays, as they say they are more active and industrious.

Foreign vessels pay a port charge of a rupee (forty cents) on each ton, and Dutch vessels half that amount.

The Government have a monopoly on salt, and gun-powder and tobacco, but all other articles are free of duty.

Gold is the chief article; the principal mine is situated at the base of a mountain, perhaps fifteen hundred feet elevation, and about twenty miles distant from the village. The mines are worked by Chinese, and produce, according to the Governor, fifteen peculs of gold annually. It is called stuff-gold, and occurs in thin lamina and grains; sometimes in masses of imperfect crystallization. It is washed from the soil at the base of the mountain.

The Chinese cut a kind of timber on the head waters of this river, called by the Dutch eiser-wood, (iron-wood,) from its weight. It has the color of mahogany, is very hard and heavy, is not attacked by insects, and is said to endure when inserted into the ground for more than half a century. The fort is constructed of this wood, and is now twenty-five years old, and is still perfectly sound. It is too heavy for ship building. A considerable quantity is exported to China.

The cocoa-nut and betel trees are planted here to some extent, but the land is too marshy ever to become an agricultural district, without immense expense in draining. A Malay prince has become wealthy, by raising coffee on some of the small round hills which rise above the low grounds.

The cassia alata is found growing here, and also, on several others of the eastern islands, and is conspicuous for its large spikes of yellow flowers, and the neat contour of its leaves.

Nearly all the species of cassia are medicinal, and are used principally as purgatives, but this species is celebrated in the east as a remedy in cutaneous affections, as porrigo, &c.

The principal shrubs growing along the river, and in the swamps, are two species of the mangrove, together with a species of magnolia, which attains a height of twenty feet.

The tribe of plants called Dilleniscea is nearly allied to Ranunculaceae, but differs in the persistent calyx and stamens, and also in habit. From Magnoliacea, they differ by their want of stipula, and quinary arrangement of the parts of fructification.

The species so common here is the Dillenia ovata, a shrub from ten to fifteen feet high, and is much used by the Malays for fencing, and takes root after being inserted into the ground. The calyx in one species is used for culinary purposes.

A very large species of Sparganium is found bending over the margin of the river, growing sometimes to the height of fifteen feet, and the stem with a diameter

of three inches. This stately species appears different in habit from the small species growing in the United States, where they only reach the height of a foot.

There is also a large tree found in the swamps, belonging to the order Anacardiaceae, and bears a large fruit, similar to the mango, but not edible.

The province of Sambas is said to be very salubrious, not only with regard to the natives, but also Europeans. This would not be the conclusion arrived at from an inspection of the country, which consists of extensive marshes principally, and a few rounded hills, which occur irregularly unconnected with a mountain chain.

In the small Malayan village before mentioned the soil was a black marl, and apparently overflowed at times, and when stirred up to the depth of a foot, emitted an almost insupportable stench, probably of sulphuretted hydrogen gas. This condition appears irreconcilable with its salubrity. Dr. Ferguson has written a treatise on the history and nature of marsh poison, (much referred to,) the result of his investigations in Holland, Spain, Portugal, and the West Indies. He tries to prove the fact that the driest situations are very frequently, contrary to expectation, the most unhealthy.

In his remarks he says, "one only condition seems indispensable to the production of marsh poison on all surfaces capable of absorption, and that is the paucity of water, where it has recently abounded. To this there is no exception in climates of high temperature, and from which we may justly infer that the poison is produced at a highly advanced stage of the drying process."

In another place Dr. Ferguson says, "it is from these, (the dried and half dried margins of lakes and marshes,) that the poison uniformly emanates, and never from the body of the lake or pond; and I think it may be fairly presumed, that water as long as it can preserve its particles above the surface is innoxious, and that it must first be absorbed into the soil, and disappear before the eye, before it can produce any mischievous effects. Whoever in malarious countries waits for the evidence of putrefaction, will, in all the most dangerous places, wait too long; as every one can testify, who has seen pestilence teem forth to the paralyzation of armies, from the bare barren sands of the Alentogo in Portugal, the arid burnt plains of the Estremadura in Spain, and the recently flooded table lands of Barbadoes."

Baron Humboldt, speaking of the intermittents which are so common near the great cataracts of the river Orinoko, says, "the causes are violent heats, joined with the excessive humidity of the air, bad nutriment, and, if we may believe the natives, (as well as the missionaries,) the pestilent exhalations that arise from the bare rocks of the cataracts." Many persons are spoken of, who, having passed the night on the black and naked rock, have awakened in the morning with a strong paroxysm of fever. Humboldt thinks that this is caused by the high temperature of the rocks, in consequence of their being coated over with a layer of the oxide of manganese and iron. The higher temperature of these rocks is a very doubtful cause; but there is a relation between this fact and those mentioned by Dr. Ferguson, of which the desiccation of nearly bare rocks in Spain, and of a very thin bed of earth overlaying coral rocks in the West-Indies, has given rise to the most pestiferous exhalation.

I may also mention a fact corroborating Baron Humboldt's observations at the cataracts. Singapore is celebrated for its salubrity, although having several marshes extending into the town and the immediate neighborhood; and I was informed by Dr. Oxly, surgeon of the honorable East India Company, that but one case of malignant fever had occurred to his knowledge since the place has been in the possession of the English, since 1819.

But an island in the harbor, called "Blatten Matte," about two and a half miles distant from the town of Singapore, is notorious for being unhealthy. This island I took occasion to visit in a Malay boat, and when passing one end where the rocks were exposed, I requested one to step out and break me off a portion; but they all declined, saying that the people always took sick who went upon those rocks, but were willing to pull a quarter of a mile farther, where they said they could obtain some on the island. These rocks are composed of a coarse sandstone, containing much oxide of iron, and coated with black oxide of manganese. I am induced to believe the opinions of these ignorant people correct, for they have no doubt been obtained from experience, for they are much accustomed to fishing about these islands, and visiting them for the purpose of obtaining pine-apples.

It is doubtful, however, that these rocks have any thing poisonous in their composition, but more probable that they attract the poisonous matter emanating from the island; for the same rock is largely exposed in and around Singapore, without producing obnoxious effects. The frigate Constitution was anchored about two and a half miles from this island, with the wind blowing from that quarter, but without any of the crew suffering from fever.

It would thus appear that no definite condition of circumstances can be pointed out which is certainly productive of this poison; as for instance the Pontine Marshes of Italy, and the arid burnt plains of the Estremadura, both highly productive of this effluvia, yet very different. Again, the arid plains of Brazil, and the swamps of Sambas, both destitute of malaria.

We may justly infer then that the poison which is so deleterious to the human constitution is not always the same in nature, but producing the same effects on the constitution; or that it is always the same, but produced under an entirely different condition of things. One state alone seems always necessary for its elimination, that is a high temperature; for I believe that there is no instance on record where it has existed under a low temperature. In all countries where there is a regular change of seasons to wet and dry, it is always most abundant at the commencement of the dry season.

It is also capable of being driven by winds to some distance from where it emanates, but probably never more than two miles. It also appears more abundant at night, is sooner imbibed or takes more effect on the system.

It is a subject fraught with much interest to mankind, and has occupied the attention of highly gifted minds for many years, but so evanescent is it in its character, that not only is its nature entirely unknown, but even its pathological effects on the system are not known to be exerted first upon the stomach or lungs.

April, 1845.—At 4 o'clock, A. M., April 8th, we left the Constitution for the city of Borneo, with three boats and about forty men, under the command of Lieut. W. C. Chaplin.

The ship was anchored about seven miles from the entrance of the bay, which is denoted by a low extent of land, which is an island partly enclosing the bay, and runs parallel with the coast, and appearing at a short distance as forming part of it. The trees on that part of the island around which it is necessary to pass are a species of pine, and are standing solitary, and the ground is elevated but a few feet.

After rounding that point we took a southwest course, keeping in a parallel direction with the right hand shore, for the bay widens and is studded with islands, which makes it difficult to ascertain where the river empties into the bay. After passing a distance of perhaps eight miles, we came to a small island with six prominent trees upon it, and containing perhaps ten acres of ground. The lower part of the island is quite low and is defended by a battery of seven or more guns, which are almost even with the water's edge, and so much covered with grass that we were within two hundred yards before we discovered them, but from appearance they were not mounted on carriages.

Judging from the muzzle, they were probably eight or ten pounds. There are several large rocks lying on this side of the island, perhaps fifteen or twenty feet in height, while the upper end is much more elevated, being thirty or forty feet in height, and has somewhat the appearance of an artificial work. On the summit of this elevation there is a small house or shed, intended, no doubt, as a lookout.

There is a small partly demolished house near the water's edge, on the river side of the island, which is inhabited by a family. This island is situated immediately below the mouth of the river, and is called, according to Mr. Lay, "Pulo Chermin" or Mirror Island, as he supposes, in allusion to the polished pieces of coal found upon it. When approaching this island we met one of the Rajah's war proahs, commanded by an officer, it was said, second in command to the chief Rajah. They had a large ensign flying at the stern, of a pale reddish yellow silk, with a triangular piece of red sed in the outer margin, with the point nearest the staff. This boat carried about forty men, and was paddled by twenty-four men, sitting along the side from about two-thirds of the bow aft. The bow of the boat was very little elevated above the water, and near the stern was a covered part extending about fifteen feet, under which the officers were seated.

One small gun was mounted amidships, perhaps four feet long and of two pounds

calibre, and also one of the same size in the bow. These guns were on carriages. Their krises were hung up in front of the covered part, the boat was sharp at the bow and stern, with the rudder on one side near the stern.

They were on a visit to the ship, but after a short conversation they concluded to return to the city, probably thinking we had some presents with us.

After getting under way again, the proah took the lead, and they commenced beating their gongs and singing, to which they kept time with their paddles, by giving two strokes in quick succession, and then pausing and giving three, and one, &c., &c. The gong, it is said, is the token of welcome.

When arriving at the island before mentioned, the proah stopped at the old house, and sent a smaller boat ahead to announce our coming; we continued on, but they hailed us, and apparently wished the small boat to arrive at the city first.

The river at the mouth is about one-fourth of a mile wide, with a slow current, and half a mile above the island becomes confined between two ridges of mountains of three hundred feet elevation, and having numerous peaks, some of which are extremely pointed; and frequently these sharp summits are covered with timber, although at many places they are entirely destitute of wood, having only a few stunted bushes and grass upon the sides, which at a distance appeared cultivated; but this is a deception, for only a few patches are really cultivated, as the soil is in most places too scanty and too sterile to admit of it. A few scattered houses are seen on the sides of the mountains, in groups of three or four, and at several places there are also a few situated in the river, twenty or thirty yards from the shore.

I observed that at a few places along the shore cocoa-nut and banana trees were cultivated, but I saw no pepper. The distance from the mouth of the river where it empties into the bay to the city, is perhaps eight miles, and on an average is four hundred yards wide. Below the small island mentioned before, there are large portions of water staked off for the purpose of fishing. These form enclosures which lead to a basket made of rattan, where the fish enter, but cannot return.

A short distance before arriving at the city, the river takes a short turn to the right; and at the inner angle, there is a rectangular mound thirty feet in height, having several mortised posts on the top, which probably once supported a building. The river widens where the city is situated, and is divided into two branches.

The houses are all, with the exception of one, built over the river on piles of the Nipa palm, and the sides are thatched. The houses are elevated about four feet above the water. There is one row of houses near each side of the river, being perhaps thirty yards from the shore, and one row in the centre, thus forming two streets about one hundred yards wide, having cross streets, making it necessary to pass in canoes from one block of buildings to another.

The Rajahs' houses are somewhat better looking, being formed of plank, instead of bamboo and thatch; yet looking more like sheds than dwellings, and would scarcely be distinguished but for the flags and cannon, and a large drum in the gable end of the buildings.

There were four flags flying in different parts of the city, three being yellow silk, with a triangular piece of red; the other was red, with a white border on the upper and lower edge.

The singular practice of building their houses over the water, where there are good sites on the shore, appears to be unaccounted for, unless it be the convenience of bathing, for they are of the Mahomedan faith; and it may also tend to keep their houses clean from vermin, particularly ants, which generally abound in tropical countries.

The principal Rajah had twelve small brass cannon, mounted under a small shed, about four feet above the water, adjoining one side of the residence.

The cannon were very neatly made, and carried a two pound ball, the metal at the muzzle being six or eight inches in diameter, and mounted on swivels.

On the point of land forming the fork of the river were several very large brass cannon, unmounted.

On entering the city we were saluted with the small cannon, and two other war proah's manned, each came out to meet us, beating their gongs, and having in the center two very large silk umbrellas, formed of gaudy colored silks, under which the officers sat, and from one to two hundred small canoes soon made their appearance from all parts of the city, all armed with small spears, but principally

containing old men and boys. Many of these canoes were very small and shallow, the sides not more than two inches above the water. There was a large shed erected near the fork of the river, containing a very large drum, made of a large hollow trunk of a tree, with leather stretched over the end, and a person was stationed by this with a drum stick in his hand. This, no doubt, was for the purpose of giving alarm, in case of attack.

The houses were crowded with natives all eagerly looking, as though it were the first time that they had beheld a foreigner. Most of the children were entirely naked; even girls ten or twelve years of age, in their anxiety to see the white men, forgetting their complete nudity, would rush through the crowd, and only withdraw when reminded by some elder member of the community.

The majority shave their heads, according to the Mahomedan faith, but several were seen with long hair.

Many were affected with cutaneous diseases, many were blind of an eye, and numbers were affected with different diseases of that organ.

The women were more corpulent than the men, and have a great sameness of appearance, marry very young, frequently at twelve years of age, and at the age of thirty are often hideously ugly.

We endeavored to purchase some fowls, but found them very scarce and dear, they asking one dollar for six.

Goats and pigs could scarcely be purchased for money, while no fruit could be had. Indeed every thing wore an appearance of poverty and wretchedness; but probably if we could have waited a few days, they might have supplied us with some provisions, as the cultivated grounds are probably some distance from the river.

As we returned, we stopped at the lower part of the city, where a few small springs issue from the bank, and where the inhabitants obtain their water, carrying it in pieces of bamboo, six or eight inches in diameter. Here I obtained a few minutes on shore, and ascending the hill, had a good view of the city, which appeared more extensive than I before supposed from a view from the river. I think fifteen thousand inhabitants for the city a low estimate.

I have found a new species of Rubas, and a twining plant, with a large yellow flower, belonging to Convolvulae.

The Dilleneaceas were very abundant.

The Flacourtia cataphracta is found growing here on the sides of the hills, the trunk being exceedingly thickly covered with thorns.

We left the village, and descended with the tide, until about nine o'clock, when having run out of the channel we struck aground, and remained there until one o'clock in the morning, when we made sail, and at half past three o'clock in the morning arrived on board the ship.

We observed no Chinese in Borneo, but, within the entrance of the bay, was a large merchant proah, manned with half-breeds; their mothers having been Malays, and fathers Chinese.

They wore their hair in a queue, the same as the Chinese.

April 10.—As the ship was getting under way I had permission to visit the island of Laboan with one of the boats.

It was distant about twelve miles from the anchorage of the ship. This is the island from which it is said coal has been obtained, and that formerly the English had a settlement upon it, on the opposite side from where I landed. I found the shore low where I touched, very thickly wooded with dense under-brush, so that for want of time I was only able to penetrate about half a mile into the interior, the ground gradually ascending, but there was no outcropping of the rocks by which a satisfactory conclusion might be drawn. The shore was strewn with large fragments of sandstone, apparently of the old red sandstone formation.

I discovered here in great numbers on the trees a species of sciurus of an extremely black color, and I think the species is undescribed.

Immense quantities of pagurus were found on the shore, and I can confirm the opinion of some naturalists, that some species only inhabit particular shells.

A beautiful kind of yellow wood, similar to box, is abundant here, and a quantity appeared to have been cut some time previous for exportation; it is probably used by the Malays for the handles of their krises.

There were no habitations on this part of the island, nor did I meet with any inhabitants. I ran across with the boat to a small island about one mile distant from Laboan, and which consists of a high rock elevated about twenty feet above the water, covered with vegetation, and the sides overhanging, having been undermined by the breakers. There was but one side where a boat could land, where I found a small cave in which were a great number of small bats.

The principal tree here was the Pandanus flabelliformis, which is peculiar for the aerial roots which it sends down from its stem, at the height of from four to six feet from the ground, and which diverge from the trunk, and take root several feet from the base, and evidently is a wise provision to enable it to grow in sandy soils, its favorite situation, where it could not without these supports maintain itself, with its heavy top of leaves and fruits, against the high winds which frequently occur in the tropics.

These trees are covered with fruit, and bear a nut, which, when mature, can be eaten.

On a rock near the edge of the water I found a very large serpent, the palamis vicolor. It appeared very sluggish, was eight feet in length, and when preparing it I found in its abdomen a very large spotted eel, one half of which was entirely digested, but even the skin of the remaining part was entire, the digestion appearing to have proceeded from the head.

Several smaller fish were found with the eel. These serpents inhabit salt water, and are provided with fangs which are poisonous, but are much smaller, in comparison to the size of the serpent, than those of the Crotalis or Trigocephalus.

The tail is flattened like an oar, and acts as a rudder when the snake is moving through the water.

The rock of this island I found to be carbonet of lime, which I supposed to be the mountain series, and it is pleasing to observe that here in the tropics, in this remote part of the globe from the theatre of geological investigations, the same rocks and the same order of succession follow as in Europe, America, and other parts of the world, where geological investigations have been made.

The opposite side of the island, no doubt, is much more elevated, and it is there, I presume, that there is an outcropping which discovers the coal, and I have been informed that experiments have been made upon some obtained from this island, which has been found to be of an excellent quality. Mr. Lay, who visited Borneo in 1835, described coal cropping out about two miles from the city. If it could be worked advantageously there, it would still, no doubt, be highly valuable, notwithstanding the land carriage of two miles to the river.

A signal from the ship called my return, and however reluctantly I left this interesting place to a naturalist, still a survey of the coal field here could have been of no benefit to our country, as the English had about two weeks previously negociated for the priviledge of the exclusive right of working all coal mines in Borneo proper.

It is their intention of forming an English settlement on the island of Laboan, and will no doubt be a valuable acquisition to their already extensive possessions in the east.

The soil of the island is very fertile, and is covered with large timber, and the locality is peculiarly healthy, having no endemic diseases, and even those epidemics, the scourges of most tropical countries, are unknown here.

The privilege of working the coal here, which the English have obtained, has been through the influence of Mr. Brooke, an English gentleman who has privately purchased the government of Sarawak, and has since offered it to the English government, and which no doubt may be regarded as a prelude to the possession of Borneo proper.

May, 1845.—The beautiful harbor of Turon, Cochin China, resembles somewhat that of Rio Janeiro, Brazil; but the surrounding scenery is not so grand, nor is the bay so capacious or secure, as one side is formed by a peninsular promontory, which is low where it joins the main land, and where the town is situated; but this perhaps would be but little objection for the safety of a vessel during a gale from that direction, as a ship would be driven to sea and off the coast.

The mountains surrounding the harbor are lofty and very abrupt, of a primi-

tive formation, and nearly destitute of large trees, but very thickly covered with brush wood, which is cut by the inhabitants, and disposed of in the city, or sold to ships, which only touch here for refreshments, wood, or water, in consequence of the king reserving the exclusive right of trade to himself, and it is only by permission of the mandarins, that their subjects can dispose or purchase the smallest article from foreigners.

Several streams of water flow from the mountains into the bay, of an excellent quality, and fruits, such as are found in tropical countries, can be had in abundance and at a reasonable price, together with pigs, poultry, and bullocks. They prepare a large quantity of dried fish, on which principally the poorer inhabitants appear to subsist, and may perhaps be the cause of the prevalence of cutaneous diseases.

The condition of the lower classes indeed appears to be more abject and servile than I had yet observed. Their clothing was of the coarsest material of grass cloth, and not removed until lost in rags; and frequently their only mantle consisted of dried leaves stitched together, which was thrown over the shoulders descending to the knees, with a small strip of grass cloth about their hips, serving as a fig-leaf. The children of this class were entirely naked.

Their food consisted of salt fish and rice, with a sauce made of shrimp and small fish of a reddish color, and used in a putrescent state. Banana leaves serve them for plates, while their rice is eaten from small bowls with chop-sticks.

Although the plebeians appeared to be in such an abject state of wretchedness, the more favored classes appear to have comprehended the advantages to be derived from the improvements of civilized nations, more than their neighbors the Chinese, for they no longer use the matchlock in their army, but have purchased muskets from the French and English, and their cannon are mounted on carriages after the European mode, and their forts are also built after the European method, which knowledge they have obtained from French missionaries, who have resided among them for many years, and have converted thousands of the natives to the Christian faith, but appear of late years to have become obnoxious to some of the mandarins, and have been persecuted and imprisoned, and some have been under sentence of death for some time, but the king's signature could never be obtained for their execution, from his pusillanimity and fear of bringing the vengeance of the French government upon his nation.

Mr. Ballister, the American consul at Singapore is his acting agent, and has educated two Cochin Chinese subjects. Having heard from one of these subjects, when on a visit to Singapore, that three French missionaries were confined in prison and under sentence of death, he sent the king word, by this means, that if they were executed they would certainly bring the vengeance of the French power upon them. The execution was delayed, and in the mean while he gave information to the French commodore in Manilla, despatched a brig to Turon, and carried them from the country. After the most positive denial of having the missionaries in their custody, it was only after the third day, when the brig had been placed in a position to fire upon the city, that they were liberated.

Their character for duplicity is well known to those who are acquainted with them, and should always be kept in view when treating with them.

The similar circumstances which detained the Constitution in this place for some days in the meritorious attempt to release bishop Lefevre, who was then under sentence of death and asked for aid, and although it did not prove successful at the time, yet no doubt may have been the means of preserving his life until the arrival of the French ship; and however much I regret the circumstance which prevented me from exploring the neighboring country, yet, the reflection that it probably was the means of saving a worthy man from a cruel death, is certainly a more pleasing recollection than the partial examination of this place, during the limited time which would otherwise have been afforded, had this event not occurred with this jealous and peculiar people.

From the little opportunity I had on shore at this place, I found many plants here common to Singapore and Borneo, but the vegetation was not of that luxuriant character, owing perhaps to the sterility of the soil immediately contiguous to the bay, but from the appearance of several cultivated vallies at a distance, the soil there was very fertile. There is said to be a very fine quality of rice cultivated in this country, which only grows on dry ground, and I had made arrangements with

one of the mandarins to procure some for me from the interior, but, unfortunately, before it arrived from the country the effort made to save the bishop stopped all intercourse.

July, 1845.—Owing to the jealous and restrictive policy of the Chinese, with regard to foreigners, I was prohibited from visiting the neighborhood of Canton, and my only resource to obtain any thing from the interior, was to employ a Chinese to go into the country, and obtain seeds of their cultivated plants, and such other objects as he thought might be of interest to me.

By this means, I obtained a large variety of seeds, and also insects in a good state of preservation; while in the mean time I employed myself in examining what could be found in the markets, inspecting their manufactories, the articles of export and import, and, by a certain deportment, which I found most agreeable to them, I ascertained that I could gain access to places where but few foreigners had ever been allowed to go, and with a small present always found the attendants polite and courteous, though while passing through those streets but seldom visited by foreigners, the crowds of spectators rendered progress almost impossible, while at the same time the stranger is saluted with the most base and insulting language—the words "fan-qui-lo" (foreign devil man) being repeated with peculiar emphasis. But I observed that it was only the lowest orders of Chinese that were thus uncivil to foreigners; but this prejudice, no doubt, has been fostered by the more influential class, who, from education and breeding, cannot themselves thus treat a stranger.

Indeed I am able to say with assurance, that, with a proper course of conduct, a stranger might pass to any part of the empire, without the least molestation; but it would be necessary to use the habit of the natives, and conform in all respects to their peculiar manners, and avoid all collision with them, and, in intercourse with them, the more urbanity and courtesy that was used, the greater would be the success. I am induced to say this in consequence of the oft reiterated remark, that it is impossible for strangers to visit the interior of China; and indeed it would be an impossibility to visit it, as travellers commonly journey in foreign countries, in their own dress, which only attracts attention. But if the traveller's object is to obtain a knowledge of the country, its productions and inhabitants, the proper course would be that of Dr. Horsefield, (an American,) who visited Java some years since, who, by adopting the dress of the Javanese, and conforming to their customs, was enabled to travel through that country with perfect safety, and highly respected for his medical skill.

The only persons who of late years have had an opportunity of visiting China, have been embassadors and their retinue, and certain Jesuits. The former have had but little opportunity of examining the productions of the country, or obtaining much information, in consequence of the hurried manner in which they passed through the country; and the latter, from being devoted entirely to religious subjects, have not been prepared, or neglected, to investigate the natural productions of the country so much desired, and which no doubt would be of great importance to the United States, as the Chinese empire is similarly situated, being on the eastern side of a large continent, in the northern hemisphere, under similar degrees of latitude, and having the extremes of summer and winter nearly the same. Being celebrated for their agricultural and horticultural knowledge, which has scarcely been interrupted for the space of three or four thousand years, we may expect therefore that there are many productions in their extended country which would be profitable in our own, and flourish there; for it is a singular fact that many species of plants in the two countries are identical; and part of their country lying in the tropics, it is very probable that they have succeeded in gradually acclimating many productions of the tropics to endure the more rigorous winters of the temperate zone.

Nearly all the productions of the temperate regions which are valuable have been derived from the tropics, which during a long course of gradual acclimation have become naturalized; but many require the preservation of their seeds through the winter, without which they would soon become extinct. This capability of naturalizing vegetable productions should always be taken into consideration when plants are introduced into temperate climates from the tropics, always preferring those which grow farthest north, or on the most elevated ground. This was well illustrated by the morus multicaulis, which first reached the United States from

the Phillipino islands, and was greatly injured by the frosts, while those procured from China have resisted the severest cold of our winters.

Therefore the similarity of the climate of Northern China and the United States would lead us to expect that the productions of the former would thrive in the latter; for the mean temperature of Pekin, for the warmest month in summer is 84° 38, and the coldest 24° 62, while that of Philadelphia is 77° and 32° 72.

Albany is 72° 38 and 23° 38; and it is very probable that southern and tropical plants, during the space of many centuries, may have gradually been taken to the north, and thus become enured to the cold of the seasons there.

These considerations would certainly warrant an investigation of the products of this extensive empire, as one which may be of incalculable value in the future improvement of our country.

Naturalists nearly all agree now in considering tea, (the great staple of China,) the production of one species, (thea viridis,) notwithstanding the many varieties which are known in commerce, more than thirty different kinds being known to the Chinese, but a few of these being exported. I obtained in Canton twenty-five different varieties, but have not yet had an opportunity of infusing and opening the leaves, but a specific difference may not be found alone in the leaf; and I was informed by Mr. Hallam, tea inspector in the American consul's hong, that of the kinds known in foreign commerce, he has not been able to detect a specific difference, but that the different varieties are produced by culture, manufacture, time of gathering, &c., &c.

The black tea of commerce is grown and manufactured in the province of Fokyen, with the exception of about one-third of that sort called by us Bohea, which one-third part is produced in the north-east corner of the province of Canton, in a district called No-ping, which gives the name to the tea in question.

The green tea is all grown in the provinces of Kiang-nan, Kiang-si, and Che-kiang, but chiefly in the two former. Green tea has been made in the districts from whence the blak tea comes, and vice versa. Some of the buds of the plant in Fokyen, are picked in the early part of the spring, before they have burst; these form the Pekoe, the most valuable tea. A small portion of these buds is mixed with the best parcels of Congo, to give them a flavor. Pekoe is also brought to Canton, unmixed with other leaves. The tea sent to Russia is said to be Pekoe, slightly adulterated by the mixture of other leaves.

In the beginning of May, the leaves are stript off the plant; a new crop is then thrown out, and picked about six weeks afterwards, and a third crop about the end of the summer. The two first pickings are the best, and nearly equal in quality. The third crop of leaves yields tea of little strength, and inferior flavor; hence the best crops are composed wholly of the choice leaves of the two first gatherings, with a small sprinkling of the buds of Pekoe. The inferior crops contain a large share of the third pickings, and none of the Pekoe.

Green teas, like the black teas, are formed by selecting the better from the inferior leaves after they have been dried, the light leaves being separated by a winnowing machine from the heavier hyson-skins. Much of the skins of Twankay, are sold as hyson skins. Copper is never used in making green tea. The bloom appearance of hyson, gunpowder, &c., is said to arise from the effects of carefully roasting the leaves in iron vases, placed over a fire, and by rubbing them against the sides of the vessel. In this process with the green teas much skill is requisite, and there is a class of persons who are hired by some of the tea merchants to superintend their respective factories.

Bohea tea is composed partly of the lower grades of the Woo-y-shan tea, which has been left unsold, after the departure of the last ships of the season, and partly of the tea grown in the district of Canton called Wo-ping. The most productive tea districts in China, according to all accounts, lie in the maritime provinces of Fokyen, Kyanti, and Kiang-nam, chiefly between 27° 30′ and 31° north latitude, and longitude 112° to 117° east. One kind, Cunguacha, a superior sort of hyson, is said by the Jesuite missionaries to be produced so high as north latitude 38°, and east longitude 100°; and another, Paculcha, brought from the province of Yannam, is said to be procured from mountains in the latitude of 25°, on the frontiers of Ava and Pegue.

The tea plant is grown on the sloping sides of mountains or in vallies, but chief-

ly at the foot of mountains. It is also produced on level tracts, but less advantageously. Besides the explicit information given by Dr. Abel, from actual examination of one district, it is sufficiently certain that the rock formations in most of the tea districts are chiefly primary, from their being productive of metals which are only found in such formations.

The best soils are said to be light gravelly, sandy and whitish, (probably calcareous,) with little accumulation of vegetable mould. Le Conte says the best tea is produced in a gravelly soil; and inferior in yellow, (probably clayey soil.) It also thrives best with an open exposure to the south.

The circumstances of climate, therefore, in regard of temperature and moisture, under which the tea-plant is cultivated in China, may be stated thus; that tea is produced over an extent of country where the mean annual heat ranges from 73° to 54° 5′ Fahrenheit, where the heat of summer does not descend below 80°, and the cold of winter ranges from 54° to 26°, where the difference between summer and winter heat is on the northern limit 59° and on the southern 30° Fahrenheit; that it is cultivated in highest perfection, where the mean annual heat ranges from 56° to 64°. That rain falls in all months of the year; and that the moisture of the climate is on the whole moderate.

The foregoing remarks will apply, in some measure, to some portions of our southern countries, where, if labor could be had at a more moderate rate, would probably form a profitable article of the planter's attention.

In Brazil, the tea-plant has been introduced for some years by the government, and Chinese accustomed to the culture in China were employed for some time, but notwithstanding it languished, for some cause unknown to me; but of late years, the culture has been revived in the province of St. Paul's, where I was informed that it was the most profitable crop raised, and flourished well, where coffee frequently failed from frost. It is being exported from the province now. in considerable quantities.

Ginseng.—The root of the Panax quinquefolium has long been used in China in large quantities, being obtained in Tartary, and also brought from the United States. That from Tartary they consider vastly superior to the American, and think it altogether distinct, and are greatly surprized to hear that we think it identical with our own; but the only difference that I could perceive, is that the roots were smaller, better clarified, and appeared to be prepared with greater care; yet from the root alone it is impossible to determine whether it is the same, or a different species. As the Chinese are very superstitious and whimsical in their opinions and actions, and governed or influenced more or less by them, it is owing to this that they put so much more value on that brought from Tartary, as I was informed by several Chinese, that their ginseng comes from the "cold country," (Tartary,) and is found but on one island, which is inhabited by tigers, making it very dangerous to visit it, and that the ginseng is without leaves, and therefore cannot be seen in the day-time, but at night a flame issues from it, at which time the island is visited by those who wish to procure it, and shoot arrows at the place, leaving them to mark the spot, until the next day, when the roots are dug up. Immense quantities are consumed by the Chinese, who consider it a panacea, and think that it gives great efficacy to other medicines, with which they always mix a small quantity, or the more wealthy use it alone in tea, esteeming it a great tonic and aphrodisiac. That brought from the United States in 1834 sold for twenty five cents per pound; in 1838, it brought fifty cents; and in 1845, it was worth sixty cents. No doubt much higher prices could be obtained, if more care was taken in the preparation and transporting it, as the American appears in the market in Canton as very inferior. The Tartar ginseng is carefully put up in boxes, made of pasteboard and handsomely gilt.

The root is also enveloped in gilt paper stamped with the druggist's name who vends it, and other particulars, and the box is half filled with roasted rice. Prepared in this manner, some of the best clarified roots, with odd forms, will sell for more than their weight in gold. The Panax quinquefolia is found in the United States, from Canada to Alabama, growing in thick shady woods on the mountain's side, but is most abundant in North Carolina, where a large quantity is dug every year, and sold to persons in a green state for six and seven cents per pound, who clarify it by steaming and then drying it. If the process of preparing it were better

understood, and the plant could be cultivated, (as probably could be done,) it would form, for many years, a considerable export to this peculiar people, who are so exceedingly tenacious of their prejudices and predilections.

Agar-Agar.—This is a sea-weed, the Fucus saccharinus, and is much used by the Chinese as a paste, and is the article of which they make their transparent lanterns. It forms an excellent paste, and is said not to be eaten by insects. It is also used in the manufacture of paper and silk, and is extensively used as a sweetmeat. It is brought from New-Holland, New-Guinea, Singapore, and all the adjacent islands. It sells in Canton at $1 50 to $2 00 per pecul (133⅓ pounds.) Its cheapness and qualities as a paste, render it worthy the attention of manufacturers of other countries.

Betel-nut.—The leaf of the Betel pepper, (piper betel,) and the nut of the areca palm, (areca catechu) constitute together the article which is improperly called betel-nut, and is used as a masticatory throughout the east. As an article of commerce, it is sold separately under the name of betel nut, so called, because it is always used with the leaf of the betel pepper. The areca nut is the fruit of a slender palm, from six to twelve inches diameter, and about thirty feet high. The tree produces fruit from the age of five to twenty-five years. The nut resembles a nutmeg in shape, color, and internal structure, but is a little longer and harder. The annual produce of a tree is about fourteen pounds, and the little care required in procuring it, enables the cultivator to sell it at fifty cents per pecul. The betel pepper is the vine from which the leaf is obtained, and from which alone it is cultivated. The flavor of the leaf is very peculiar, being between a herbaceous and an aromatic taste, and a little pungent. The vine requires a rich moist soil. The tree on which it is supported, it is affirmed, affects the quality and quantity of the produce. In the preparation the nut is cut in pieces, wrapped in the raw leaves with a small quantity of lime, sufficient to give it a flavor.

All classes of people are in the habit of chewing it, male and female, and they say that it sweetens the breath, rectifies and strengthens the stomach, and preserves the teeth, and gives the gums, lips, and teeth a dark red color, which is esteemed a mark of beauty in proportion to the darkness. There is probably less objection to its use than tobacco; its narcotic properties are not so great, and its taste is more pleasant. It probably does not preserve the teeth, as the teeth of those nations who use it are not so liable to decay as Europeans or their descendants. It is said by some to be an effectual preventive for dysentery, which may also be doubted. Those brought from the coast of Malabar are not so good as those from the Indian Islands. The betel-nut leaf is used in India for dying cottons. It sells for $2 or $3 per pecul.

Aniseed-Stars.—These are the fruit of a small tree, (the Illicium anisatum,) which is cultivated in China. They are valuable for the volatile oil obtained from them, and also for the husks, which have a more aromatic flavor than the seed, but are not so sweet. The Chinese use them to season sweet dishes. They are exported at $11 or $12 a pecul; the oil at $2 per catty, which is generally used for medicinal purposes.

Benzoin or Benjamin.—This resin is the concrete juice of a small tree, (the styrax benzoin,) which grows in Sumatra, in rich moist soil. Its geograpical limits are the same as the camphor tree, being only found in Borneo proper, and in the country of the Battacks, in Sumatra; but, unlike that tree, is cultivated. When the trees are seven years old, an incision is made in the bark, and the gum which exudes is carefully scraped off. The trees produce the best Benzoin in three years. This first gathering is called "head;" that which is produced during the next eight or ten years, and which is inferior in quality, is known by the name of "belly;" and at the end of the above period, the tree is supposed to be worn out, and is cut down and split to pieces, and all the gum is scraped off from the fragments of wood, which last is denominated "foot," and is full of sticks and dirt. The price is $50 to $100 a pecul for the best, $25 to $45 for the second, and from $8 to $20 for the third. It is used for incense in the churches, and for fumigating houses.

Galangal.—This root is obtained from two different plants, the greater from the haempferia galanga; the smaller from the maranta galanga. The greater is a tough woody root with a thin bark, and full of knobby circles on the outside. It is bitter-

ish, less aromatic, and less valuable than the smaller. This latter is a root of a reddish brown color outside, and pale red within. The roots are about two inches long, and the best are full, oval, and plump, have a bright color, a hot acrid peppery taste, and an aromatic smell. The smaller, which should be obtained if possible, sells for $3 50 to $4 a pecul. It is used in cookery.

Gamboge.—This is a well known gum-resin, produced by the Staglamitis gambogioides, which grows in most of the warm countries of the east, and is shipped in considerable quantities from China to the west. It is used as a beautiful pigment, and as a valuable purgative medicine. The price varies from $70 to $75 a pecul.

Cotton.—Raw cotton is brought mostly from Bombay and Bengal; and usually it sells from nine to thirty-one taels per pecul. Except sheetings, which are from the United States, cotton piece goods are imported from England, the chief of which are cambric, muslins, chintzes, and long-cloths. Good unbleached long-cloths are the most suitable; cambrics are much in demand. Cotton yard comes from England and India; that from numbers twenty-two to forty-five is the most saleable. The sale of cotton goods, of all descriptions, is annually increasing. The Chinese tacitly acknowledge their superiority by slowing adopting them in the place of their own goods.

Cubebs.—These are the fruit of the piper cubeba, a vine growing in China, Java, and Napal. Cubebs are valued at Canton, at from $18 to $20 per pecul. Eighteen thousand five hundred pounds have been imported into England in one year, but the Dutch carry on the largest trade.

Damar.—This is a resin flowing spontaneously from several species of pines in the Malay peninsula. It is found in hard lumps, both under the trees and on their trunks. It is used for closing the seams of vessels.

Dragon's Blood.—This substance was well known to the ancients, and is obtained from the calamus ratang, a large ratan which grows in Borneo and Sumatra. It is found in the markets in oval drops, or in large and impure masses, composed of several tears. It is often adulterated with other gums, but that which is genuine melts readily, and burns wholly away. It is scarcely soluble in water, but fluent in alcohol. Its uses are various, in painting, medicine, varnishing, and other arts. The best is procured at Banjermassen, in Borneo, and is brought to this market in reeds. Its price varies from $80 to $100 per pecul. The Chinese hold dragon's blood in much estimation as a medicine.

Ebony.—This is the heart-wood of the dyrsperas ebenous, a tree found abundantly on the islands of the Indian ocean. The price of Mauritius ebony is about $6 per pecul, and that of Ceylon and India $2 50.

Campoor Cutchery.—This is the root of a plant which grows in China, but what plant produces it I have not been able to determine, having seen nothing of the plant but the root. It is about half an inch in diameter, and is cut into small pieces, and dried for exportation to India, and from thence to Persia and Arabia. It is of a whitish color inside, but externally it is of a reddish color, having a pungent and bitterish taste, and a slight aromatic smell. It is used for medicinal purposes, and to preserve clothes from insects, but is liable to be eaten by insects, as I experienced with some I purchased in Canton. It sells for about $6 a pecul.

Cardamons.—The lesser and greater cardamons are the products of two different plants, Elettaria cardamomum and Amomum cardamomum. The capsule alone is used, and merely requires drying to be ready for sale. The lesser grows principally on the coast of Malabar, while the greater grows in China and Ceylon. Both are used in China to a considerable extent for culinary purposes.

Nutmegs.—The illiberal policy of the Dutch with regard to the spices has forced the raising of the nutmeg tree at Bencoolen, in Sumatra, at Penang and Singapoore, and many other places in the Archipelago, but attended with some disadvantages. In the Canton market, nutmegs sell from $120 to $140 a pecul. Considerable quantities are brought in junks, but the greater part in foreign vessels.

Musk-Seed.—These are the fruits of the hibescus abelmoschus, which grows in China and other countries. The Arabians use them to give flavor to their coffee. The seeds are flat, kidney-shaped, and about the size of a large pin's head, and have a considerable odor of musk, with a slight aromatic, bitterish taste. They are now raised in South America and the West Indies.

Myrrh.—This celebrated gum is brought from Arabia and Abyssinia, and is much used by the Chinese for incense and perfumery. It exudes spontaneously from a tree of the genus acacia, or is obtained by an incision. The pieces ought to be light, clear, and unctuous, but very often other gums are mixed with it. The price varies from $3 to $4 per pecul in the Canton market.

Mace.—This article is taken to China in some quantity. There is a kind of mace found in Malabar which externally resembles the true, so that the sight alone cannot distinguish them. That from this coast has a resinous taste, and is but slightly aromatic.

Camphor.—The camphor-tree (dryobalanops camphora) is only found in Borneo and Sumatra, and there confined to a small extent of country, extending about three degrees north of the equator.

In Sumatra the best gum is obtained in the district of Barus, and hence all similarly good brought from these two islands is called Barus camphor. To collect it the natives go into the forest, cut down the trees, and split them open, and scrape the gum from the fragments; it is there found in small fragments as a thick gum, ready for use.

Not one tenth part of the trees yield gum or oil, and, not being cultivated, the Barus camphor is becoming more and more scarce. Before cutting the trees down it cannot be determined if the trees are productive or not.

It is divided into three kinds. The best is in lumps, apparently crystallized in the crevices of the tree; the second is somewhat brownish, and but few sticks in it; while the third, and worst, is the refuse scrapings.

All that is produced in Sumatra and Borneo, about eight hundred peculs annually, is brought to China, where it brings nearly eighteen dollars a pound, while that from Japan brings but one dollar, although there is no perceptible difference between them. Nearly all the camphor exported to Europe and America is obtained from the laurus camphora, a tree which grows in China, Japan, and Formosa. The tree, including the roots, is cut into small pieces and boiled, the sublime gum being received into inverted straw cones. It is then made into greyish cakes of a crumbling consistence and brought to market. That from Japan is esteemed the best. The Dutch sent from Japan in seven years to Europe 310,520 pounds. The price is from twenty to thirty dollars per pecul, while that of Barus is from one thousand to two thousand dollars.

Amomum.—This is the seed of the amomum verum, and has a strong taste and pungent aromatic smell. The fruit is shaped like a grape, and contains three cells, in each of which there is a number of blackish seeds. The pods are of little value, as are the seeds also when they are wrinkled and small. When good, the pods are heavy, of a light grey color, and filled with grains. Their uses are similar to those of star aniseeds.

Assafoetida.—There are considerable quantities of this gum brought to Canton, and it ranks very high in the materia medica of the Chinese physician. It sells at from four to five dollars a pecul.

Bamboo.—The different uses to which this plant is applied in China is perhaps greater than any other vegetable production in the known world. It is used for building for masts, and for all the purposes to which round timber can be applied, when it is not required to be exceedingly strong; also for food, the young shoots being eaten when six or eight inches high, and three to four inches in diameter. From it most of their paper is produced; cups, boats, sails, ropes, medicine, sweetmeats, lamp-wicks, beds, pillows, fodder; and the roots are also fashioned into the form of gods, after the manner of old sages, the small fibres forming the beard; and in many of their houses are paintings of it, which is one of their objects of worship. It is exported in considerable quantities for canes, umbrella-sticks, &c.

Gambier, of which I have given a description before, is imported in considerable quantities into China from Java and other islands. The trade is in the hands of the Chinese, who pay at the emporia one dollar or two dollars per pecul. One of the principal of its uses among the islanders is as a masticatory with the betel-nut. It is used in China for tanning.

Oil of Nutmegs.—Nutmegs produce both an essential and volatile oil. The former is known under the name of Banda soap. It should be free from impurities, and of a pleasant aromatic smell. The volatile oil is not known in commerce.

The nutmeg from which the oil has been extracted is sometimes offered, but they are of no use or value.

Olibanum.—This is the frankincense of the ancients, and is used in China, as in other countries, for incense in temples and perfumery in houses. It is yielded by the juniperus lycia, a large tree which grows in Arabia and India. It is seen in market in tears of a pink color, brittle and adhesive. The boxes each contain one hundred weight of garbled olibanum which sells at six dollars per pecul: and the ungarbled, at two dollars and three dollars per pecul in the Canton markets.

Pepper.—This is the fruit of the piper nigrum. That brought from Sumatra and Penang is superior to that which comes from Java and Borneo. The pepper trade is larger than all the other spices, and solely because it is a free trade. Much comes to Canton from Malacca. It sells from six dollars to sixteen dollars per pecul.

Putchuck.—This is a medicine brought from India and Persia, and is the root of an undetermined plant in those countries. The color and smell are similar to rhubarb, and when chewed, it becomes mucilaginous in the mouth. The price varies from twenty to twenty-two dollars per pecul.

Rattans.—These are the branches of the calamus ratang, the same plant that produces the dragon's blood. They are found in most of the islands of the Indian Archipelago, but in the greatest perfection in the district of Banjerwassen in Borneo. The young shoots are the most valuable for their pliability and strength. After being stripped of their epidermis, the rattans are doubled and tied up in bundles, containing one hundred each. As they require no cultivation, the natives can afford to sell them at a very cheap rate. They are brought to Canton in junks, and sell from two and a half to four and a half dollars per pecul. Foreign vessels also bring them. The Chinese use them for cordage, chairs, mats, beds, &c. Rattan ropes, bamboo timbers, and palm leaf boards are all the materials employed in constructing a common house in China for the poor.

Rhubarb.—This drug is the dried roots of the rheum palmatum, a plant which grows in Tartary and China. The Chinese dig the roots early in the spring, before the leaves appear, and cut them into long flat pieces; dry them for two or three days, and then string them on cords, put them in cool places, and dry them thoroughly. Rhubarb varies in its prices, from thirty-eight to forty dollars per pecul for those roots cured without splitting, and fifty to seventy dollars per pecul for the cut. The rhubarb found in this market has always been inferior to that of Russia and Turkey.

Rice.—This is the great staple commodity among the Chinese, and the importation of it is encouraged by all possible means. Formosa, Luconia, Cochin China, and the Indian islands supply China with great quantities. To induce foreign shipping to bring it to this market, the government has permitted all ships laden solely with cargoes of rice to pass free of the cumsha and measurement duties required at Canton. The price given for a cargo of rice varies from one dollar twenty five to two dollars twenty-five, rising in seasons of scarcity to two dollars seventy-five, and for very good three dollars per pecul.

Rose maloes.—This is a substance of the consistence of tar. It is brought from Persia and India to China, and when good has a pearly appearance. The price is about thirty dollars per pecul.

Sandal wood.—This is the heart of a small tree, the santalum album, which grows in India and many of the islands of the Indian and Pacific oceans. The tree resembles myrrh in size and appearance, the flowers are red and the berries black and juicy. The color varies from a light red to a dark yellow. The deepest color is the best. The best sandal-wood comes from the Malabar coast, and sells from ten to eighteen dollars a pecul. That brought from Timor is worth from eight to ten dollars, while that found in the Sandwich islands is valued at from one to six dollars. The chips also form another sort. The Chinese use sandal-wood in the form of a fine powder made into incense sticks to burn in their temples and houses. An oil is extracted from sandal-wood, which is highly valued for its aromatic qualities. It has the consistence of castor-oil, a yellow color and a highly fragrant odor, and sinks in water.

Sapan-wood.—This is the wood of the caesalpina sapan, a tree which grows in India, Luconia, and Burmah. The tree is of the same genus as the Brazil-wood, and has the same properties in an inferior degree, and on that account is not im-

ported into Europe. It is cultivated for its red dye, which is the best known to the Indian islanders. It is used in cabinet work for inlaying, to a limited extent. Its value is about two dollars a pecul in the Canton market, where large quantities are brought, chiefly from Manilla.

Cassia.—This is of three kinds, cassia lignea, which is the bark of the tree; cassia buds, and cassia fistula or pods; the latter is commonly known by the name of senna; cassia lignea is the substance commonly called cassia, and is exported from China to all parts of the world. It is the decorticated bark of the laurus cassia, a large tree, which grows in China and Japan in large quantities; the tree is also found in the Indian Archipelago. The cassia brought from Ceylon and Malabar is inferior to the Chinese, being more liable to foul packing, thicker and darker colored, and less aromatic.

The Chinese cassia is sewed up in mats, usually two or more rolls in each mat, and a pound in each roll, and is easily distinguished from cinnamon, which it resembles, for it is smaller quilled, breaks shorter, and is less purgent. The liability to mistake happens only in distant markets, as the trees grow in different countries.

Cassia fistula is the plant that produces the cassia pods. Cassia buds are the fleshy receptacles of the seeds of the cinnamon tree, and bear some resemblance to a clove, and when fresh possess a fine cinnamon flavor. The relative value of Cassia bark and buds is as eight to five, but this varies, however, with the quantity in market.

Cassia Oil.—This oil is obtained from the leaves of the cassia tree by distillation, and is used as a medicine under the name of oleum malabathri. It is easily tested by putting a small quantity on the hand, which will slowly evaporate, and thus any foreign substance will be detected. The leaves are exported under the name of folia malabathri. All parts of the cassia tree are useful; the wood, the bark, the leaves, the buds, and the oil, are all in request for various purposes, in carpentering, medicine, and cookery. The price of cassia varies from eight dollars to twelve dollars per pecul, and the buds a little in advance of that of the oil, which is from one dollar fifty to two dollars per catty.

China root.—This is the China smilax, a climbing plant. The roots are jointed, knobbed, thick, of a brown color, and break short; when cut, the surface is smooth, close, and glossy; but if old and wormy, dust flies from it when broken. The market price varies from three dollars twenty-five to four dollars per pecul. It is used by the Chinese extensively as a medicine, and is exported to India for the same purpose.

Turmeric.—This is dried root of the curcuma longa, a herbaceous plant, cultivated in all the Indian islands and on the continent, for its coloring and aromatic qualities. The color is very transitory, and no method has yet been found to set it. It has an aromatic smell resembling ginger, and a warm bitterish taste. It is used much as a spice, and is always an ingredient of curry, so much prized in the east. Turmeric is a good test for free alkalies, and the quantity used for this purpose is considerable. Its price varies from five to six dollars per pecul.

Whangees or Japan Canes.—These are the produce of a plant which grows in China. They are well calculated for walking sticks, and should be chosen with care. Their value is about eighteen dollars per thousand.

Cutch or Terra Japonica.—This substance was for a long time supposed to be an earth, but it is now ascertained to be the extract of the acasia catechu. It is imported from Bombay and Bengal. That brought from the former place is friable, and of a red brown color, and more hard and firm than that from Bengal. It varies considerably; some kinds being ponderous and compact, others very light and friable; some more, and others less astringent. The value varies from four to five dollars per pecul.

Horns and Bones.—These animal products are brought to Canton in junks from the adjacent countries, and form an important article of import with the native vessels. The horns are made into handles, combs, &c., and buttons, and other useful articles, and the bones serve for various fancy articles, and are sometimes burned into lime. In a single year five hundred and two peculs have been brought to Canton.

Mother-of-pearl Shells.—These are imported to and exported from this port. The Persian Gulf, the coasts of India, and the Indian Archipelago, produce them

in the greatest abundance. The Chinese manufacture pearl shells into a great number of trinkets and toys, as beads, seals, knife handles, spoons, boxes, &c. They also inlay them in lacquered ware to represent flowers, trees, &c., where the play of colors is very rich. But the Japanese excel in this work. The shells are brought in the rough state by the junks and foreign vessels, and sell from nine to twelve dollars per pecul. When exported the price is a little in advance.

Musk.—The genuine is much prized, and is rare and costly, on which account it is often much adulterated. It is found on a species of antelope, the mochus mochifera, inhabiting Thibet, Siberia, and China. In this market musk is found in the bags, about as large as a walnut, in which it grows on the animal. The price varies from forty-five to sixty dollars a catty, according to the quality. It is used for perfumery and medicine. The musk-ox of North America produces this substance of an inferior quality, and that which comes from Russia is very inferior.

Beeswax.—Considerable quantities of beeswax are imported into Canton from Europe and the Indian Archipelago, and in some measure it has superseded the product of the tallow-tree, (the stillingua sebefera.) It is used in Canton for cases or envelopes for the tallow of the stillingen in the manufacture of candles used in their temples. It is worth about five dollars per pecul.

Coral.—Coral is brought from all the islands of the Indian Archipelago, and is wrought by the Chinese into many ornaments. It sells at from forty to sixty dollars per pecul, according to the color, density, and size of the fragments. It is made into buttons and beads used among the Chinese as insignia of office.

Elephants' Teeth.—These are brought from Africa, Siam, Burmah, &c. The largest and best weigh from five to eight to a pecul, and decrease in size to twenty five in a pecul. The Chinese manufacture a great number of fancy articles from them, such as card cases, boxes, miniature ships, junks, &c. A Chinese will work a month on a card case and then sell it for three dollars. The figures are sketched first with a pencil, and with a number of small steel instruments the ivory is cut and scraped away so as to leave the figures in full relief. From a quantity of ivory worth three dollars, they will make a toy worth one hundred dollars. The ivory is softened previously to cutting, as is often supposed by foreigners. The largest teeth are valued at ninety dollars a pecul, and the cutting at seventy dollars. The principal part is brought from Burmah and Siam.

Fish-maws.—These are the stomacks of fishes, and are used as an article of luxury among the Chinese. These are of a cartilagenous nature. They are brought in junks from the India islands. The price is from thirty-five to seventy dollars per pecul. It is used for food, as a tonic and aphrodisiac.

Glue.—This article has become an article of export from China, being sent to India, and even beyond the cape, but is inferior in quality to American or European. It sells from eight to ten dollars per pecul.

Shark's Fins.—The fins of the shark are sought for from the Indian ocean to the Sandwich islands to supply this market. The chief supply is from Bombay and the Persian gulf. They are fat and cartilaginous, and when cooked, esteemed by the Chinese as a stimulant and tonic. They should be well dried, and kept from any moisture. About five hundred pieces are contained in a pecul. The price is from fifteen to forty-five dollars a pecul.

Skins.—These were formerly one of the most profitable articles that could be taken to Canton. But their high prices and the introduction of woolen goods has naturally lessened their importation. Seal and otter are the most in request, the latter selling as high as forty dollars a skin. Beaver, fox, and rabbit are in demand, but the supply is limited. Many skins are brought to Pekin from Siberia by the Russians.

Stock-fish.—These are dried fish brought from Germany, cured without the use of salt. In appearance, when preserved, they resemble codfish. The quantity brought is small. The price is about four dollars or five dollars a pecul.

Tortoise shell.—This is the crustaceous covering of the testudo imbricata, found on the shores of most of the Indian islands. The common name is hawk-bill tortoise. The shell is thicker, clearer, and more variegated than that of any other species, and constitutes the sole value of the animal. It is heart form, and consists of thirteen inner, with twenty-five marginal divisions. The middle side pieces are thickest, longest, and the most valuable. The others are denominated "hoof."

The Chinese use large quantities in the manufacture of combs, boxes, toys, &c. The marts of this are Canton and Singapore, from where it is sent to Europe and the United States. The price varies from one thousand to eleven hundred dollars per pecul. The thin kind from the Pacific is not saleable in Canton.

Bezoar.—This is a concretion found in the stomachs of several animals, but that of the goat was formerly most prized, and has sold for ten times its weight in gold; but since its constituent parts has been ascertained it is not so much sought after. The bezoar differs in the same species of animals, but that of the cow is most prized in China, and is valued at from twenty to twenty-five dollars a catty. It is caused by disease of the animals, and is only used for medicine.

Bicho-de-Mar.—This slug, as its name imports, is a product of the sea. This animal is of a dark or brown color, from four to six inches in length, and from a half to one inch diameter. It forms one of the most important articles of commerce between the islands of the Indian Archipelago and China, with the exception of perhaps pepper. It is found on all the islands from New Holland to Sumatra, and on most of those of the Pacific. It is found in most abundance on small coral islands. The Chinese call it "Hog-shum." It is taken by the hand with the natives, they diving for it; and after it has been cleansed, dried, and smoked, it is fit for sale. Latterly, Americans have been engaged in it, and have found it profitable, by visiting islands but little known in the Pacific. The Chinese use it in large quantities as food, and when boiled it is tremulous like pigs' feet, and rather insipid, but no doubt very nourishing, and they also think it an excellent aphrodisiac. The varieties into which they divide it are about thirty, varying in price from eighty to one hundred and fifty dollars per pecul. About seven thousand peculs are brought from Macassar annually, and about the same from Manilla.

Bird's-nests.—This article, which owes its celebrity only to the whimsical luxury of the Chinese, is brought principally from Sumatra and Java, also from Borneo, and most of the rocky islets of the Indian Archipelago. It is the nest of a small swallow, the hirundo esculenta. It is composed of a mucilaginous substance, perfectly insipid to the taste, and is used principally in soup, and is held in still higher reputation as an aphrodisiac than bicho-de-mar. They are of a light color, inclining to red, about four inches long and two inches wide, and about a quarter of an inch in thickness, and when dry, they are brittle and wrinkled. Those that are dry, white, and clean, are most valued. They are packed in bundles, run through them to preserve their shape. Those procured after the young are fledged are not saleable in China. The qualities of the nests vary with the caves in which they are found. Those that are most prized and bear the highest price, are taken before the nests are lined with feathers, while those with eggs are still valuable, but those that the young birds have remained in some time are dark colored, streaked with blood, dirty, and not saleable. The nests are procurable twice a year. Those procured in the deepest, dampest caves are the best. It was at one time supposed that they were only found near the coast, but they are obtained for more than fifty miles in the interior, as in Borneo, which refutes the idea that they are formed from bicho-de-mar or the spawn of fish. The business of obtaining these nests is at some places extremely perilous, it being necessary to descend from precipitous cliffs, by means of bamboo and cords, where the sea is breaking furiously below, and often necessary to use torch lights in the caves, where the slightest slip would be fatal to the adventurer. They are only purchased by the Chinese, by whom they are carried to Canton in junks, where there are merchants who deal extensively in this trade, and many persons are employed in picking the feathers and dirt from them, after being immersed in water until being softened, and many are broken and torn to pieces in the process. The best or white kind are often worth four thousand dollars per pecul, which is nearly twice their weight in silver. The middling kind is worth from twelve hundred to eighteen hundred dollars, while the worst is worth from one fifty to two hundred dollars per pecul. The best is sent to Pekin for the use of the court. It appears to be only an article of expensive luxury among the Chinese, the Japanese not using them at all; and how they came at first to use them, is indeed as singular as their persevering in it at such expense. The expense to render it fit for the table is enormous, where it is used in soup or made into a jelly. It is a monopoly with all the governments where it is found. About twenty-five thousand peculs, at a value of one million two hundred and seventy-five thousand dollars,

are annually brought to Canton. This comes from the islands of Java, Borneo, Sumatra, Macassar, and from the Súlú group. Java alone sends about twenty-seven thousand pounds of the best quality, estimated at sixty thousand dollars.

Cochineal.—China affords a considerable market for this dye, which is taken there from Mexico and England, and is used in dyeing silk, crapes, &c. Attempts have been made to raise it in India, Java, and Spain, but with little success. The climate and situation of Japan and China being similar to Mexico, it is probable that the cultivation of the plant and the domestication of the insect would be successful in those countries. It is occasionally imported into China from Manilla, which is called ungarbled, to distinguish it from that brought from England, which bears the name of garbled. Garbling is the name given to the process of repacking it free from impurities. Garbled cochineal is valued at two hundred and eighty to three hundred dollars per pecul; and ungarbled, at from one hundred and eighty to two hundred and forty dollars.

Gold.—This metal is brought from Borneo to China, generally in the shape of dust, and is there cast into bars called shoes, which are not used as coin, but merely as bullion. The purity of the metal is ascertained by the touchstone, which gives a different colored mark where the gold is of unequal purity. This is called a touch, and the color shows the proportion of pure gold. Needles for comparison are also made of different proportions of alloy, by which the stone is rubbed at the same time with the gold. It is also tested by nitric acid, but this is not allowed in Borneo. To express the fineness of gold, it is divided into one hundred parts, called "touches." Thus, if the gold is said to be ninety-six touches, it has four parts alloy. They become so expert in the use of the touchstone, that they can detect one and two per cent. of alloy. Their knowledge of assaying is very slight, and their silver in bullion, which contains some gold, has made it an object with foreigners on that account. The range of the touch is from seventy to one hundred dollars, and to each a different name is applied. Gold leaf is made by the Chinese in great quantities, and is used for ornaments in their temples, &c.

Iron.—Iron in rods, bars, and scraps, has lately become an article of importation in the market. Bar iron from one to three inches wide, and rod of one fourth inch and less, are the common sizes imported. Bar is worth from one dollar and eighty cents to two dollars per pecul. Rod from three to three dollars and fifty cents, and scrap about two dollars and fifty cents per pecul.

Lead.—Much of this metal is imported in the form of pig and sheet lead. The market price varies from five to six dollars per pecul. Very little lead is found in the east. A considerable part of that which is imported is made into paints by oxidation, and exported again as red and white lead. The red lead sells for about eleven dollars per pecul, and the white at ten dollars. The linings of the tea chests consume a large quantity. The mode of making the sheet lead is very simple. Two smooth stones of marble are placed near the melted lead, and the workman, holding the upper stone by the side, with the opposite edge resting on the lower stone, pours the liquid on the under one, and then drops that which he held in his hand. The art of dropping the upper stone in such a manner as to make the sheet of a uniform thickness is the only difficult part of the operation.

Quicksilver.—Quicksilver is brought to China in considerable quantities from Europe, and occasionally from America. The most part of it is converted into vermillion by oxidation, and in that state is used for painting on porcelain. Vermillion also forms an article of export to India and Europe. Quicksilver is frequently adulterated with tin or lead, and the fraud can be detected by boiling it to evaporation, when the other metals will remain. This metal ranges between sixty and one hundred and thirty dollars per pecul, and is one of the most variable commodities.

Copper.—This metal is found in Persia, Sumatra, Borneo, and Japan. It formed an export from Persia to England formerly, but is now sent from England to India. In the island of Borneo copper has lately been discovered, and it has been known a long time in Sumatra and Timor. The utensils made of this metal in those islands always contain some iron, and the bars or cakes into which it is cast, when sold for unalloyed, require much labor to make them pure and malleable. The ore is so rich as to produce half its weight of pure copper. The copper found in Japan contains gold in alloy, and occurs in the markets in small bars, six inches long,

flat on one side and convex on the other, weighing four or five ounces each. This copper is the most valuable of any found in Asia. South American copper is brought to this coast, but not latterly to the market in Canton, as it brings a higher price at Lintin for remittance to India. The price so obtained is from nineteen to twenty-two dollars per pecul. There is a natural alloy of several metals found in the interior of China, known under the name of white copper, which is used by the natives in great quantities. The constituents are not known, but copper and iron are probably the chief. It is used for spoons, dish covers, pipes, &c., which, when new and polished, look almost as well as silver; but I was informed by the Chinese that it was very difficult to work. It sells for about fifty cents a pound.

Tin.—This metal is found very abundantly, and of a pure quality, in the island of Banca. It is cast into ingots, weighing from twenty to sixty pounds, and is more pure than that from Malacca. The former is known in China as "Banca tin," and the latter as "Straits tin." The former sells for about seventeen dollars, and the latter from fourteen to fifteen dollars per pecul. Plate tin is brought from Europe and the United States in boxes containing from eighty to one hundred and twenty-six plates, and sells for about ten dollars per box.

Smalts.—This is an impure oxide of cobalt united with potash. In the mass it is not so much used, but when ground fine is employed in coloring glass and porcelain. The powder is of a fine azure blue. The demand is but limited. The price is from fifty to ninety dollars per pecul in the Canton market.

Tutenage or China Spelter.—This is an alloy of iron and copper and zinc. It is harder than zinc, but less so than iron, sonorous, compact, and has some malleability. The fresh fracture is brilliant, but soon tarnishes. It is used for dish-covers, household utensils, and other similar purposes. The art of making it is only known to the Chinese. Its export price used to be about fourteen dollars a pecul.

Steel.—Swedish and English are the kinds imported. The quantity brought is increasing annually, and probably the demand will be greater every year as the use becomes better known. From four to five dollars per tub is the usual price.

Spelter.—This is the impure zinc used in the manufacture of brass. It is in plates of half an inch in thickness, of a whitish blue. The Chinese import it but little, the mines found in their own country furnishing them with a supply. It sells for five dollars and a half per pecul.

Vermillion.—This is made of quicksilver by oxidation, and is then exported. It is also used for painting porcelain. The price, which is about thirty-three dollars a box, is regulated by that of quicksilver. The boxes contain fifty catties each.

Hartall or Orpiment.—This is an oxide of arsenic, and is used as a yellow paint. It is found in China, Hungary, and Turkey. When good, it has a yellow lemon color, with a shade of green, with a foliaceous shattery texture. Its lamina are a little flexible, and when burned it throws off much sulphurous smoke. The market price is from fourteen to sixteen dollars per pecul.

Alum.—This substance is obtained in considerable quantities by the Chinese, and exported to the Indian Archipelago. It is frequently adulterated with gypsum, lime, &c., and the taste is not so strong as that in our markets. Large quantities are employed to purify the water of the river for culinary purposes. The duty on the article when exported is five taels per pecul. Its value in the market is from two to three dollars per pecul.

Amber.—This substance is found on the shores of China, and is principally used for ornaments and incense. It frequently contains insects, which are valued as curiosities. The price is from eight to fourteen dollars per catty, and it is said that there is also false amber to be found in the markets.

Saltpetre.—Saltpetre is brought from India where it is obtained by lixiviating the soil. It is also found in Sumatra, in caves and other protected places, and is an article of importation from the Indian Archipelago. The quantity brought to this market is small, as the Chinese make nearly enough for their own consumption, and the unlimited importation is prohibited by the government, lest the people manufacture it into gunpowder too freely. The price varies from four dollars seventy-five cents to twelve dollars and upwards a pecul.

China Ware or Porcelain.—At present the foreign demand for this ware is very limited, and that which is purchased is more for curiosity as Chinese than for its

value or beauty, as the European manufacture is at present far superior, and even the foreign residents send to Europe for their ware. China ware is sold in sets, consisting of a table set of two hundred and seventy pieces, at from twelve to seventy-five dollars; a breakfast set of twenty pieces at three dollars, and a short tea set of forty-six pieces, at from five to six dollars. They manufacture articles to any pattern given.

Cudbear.—This is a powder used in dyeing violet or crimson. It is procured from the lichin tartareous, a plant found in Iceland. Its colors are not durable when employed alone, and it is therefore used as a body to other more expensive dyes, as indigo, cochineal, &c., making them more lively. It is used by the Chinese but little, and the demand is small.

Preserves.—Large quantities of preserved sweetmeats are exported from Canton, the principal of which is ginger, being the tender roots and tops of that plant. Also small oranges, and also another kind which is called "chow-chow," which is a mixture of citron, sea weeds, ginger, &c. These are neatly put up in delf-ware jars of about half a gallon each, and sell for about six dollars the dozen. Considerable quantities are carried to Hamburgh and Singapore, previous to being shipped to the United States and Europe.

Brass-leaf.—This is made in considerable quantities in China for the Indian markets. It is worth from forty-five to fifty dollars a box.

India-ink.—This is the only ink used by the Chinese. It is made of lampblack and glue, and formed into cakes and sticks, which are often perfumed and gilded. Good ink is of a shining black color and free from all grittiness, which last particular can be ascertained by rubbing it on the nail a little wet. It was once supposed to be made of the black fluid of the cuttle-fish.

Lacquered-ware.—Formerly this ware was exported in large quantities to Europe and the United States, but at present the demand is small, owing to the great liability to be damaged. The articles now sent to the United States and Europe consist of those articles which have always been in demand, as fans, waiters, boxes, tea boards, &c. The patterns affect their sale, and the least mark spoils the varnish. The best kind of ware comes from Japan. The varnish with which this kind of ware is covered has never been successfully imitated in Europe, probably because the varnish tree does not grow in the west.

Mats.—Mats are made by the Chinese very beautifully. Those made of ratan are the best, and the demand is yearly increasing. They are very durable and handsome. Those made of rush and bamboo are inferior.

Soy.—This is a condiment made of a species of bean which grows in China and Japan. To make it the beans are boiled soft, and then an equal quantity of wheat or barley is added; after this has thoroughly fermented, a quantity of salt and three times as much water as the beans were at first are added. The whole compound is now left for two or three months and then pressed and strained. Good soy has an agreeable taste, and if shaken in a tumbler lines the vessel with a lively yellow brown froth. The color of soy in the vessel is nearly black; it improves much by age. The soy bean forms the national dish of Japan. Soy is beginning to be exported in considerable quantities to Europe and the United States. The price in Canton is twenty-five cents per bottle. I have procured seed for an experimental trial in the United States.

Sugar.—This article is made by the Chinese in sufficient quantities to supply themselves and to export. They have several varieties of cane, but many have a reddish juice, which injures the sale of the sugar. The kind cultivated is the same as that of the West Indies. The process of manufacturing is simple and laborious. Their machinery is coarse, and the power human strength. They do not appear to understand refining, but crystallize it, and in that state send large quantities to India, where it is much esteemed. Much is pulverized in mortars, when it forms a white sugar.

Thread.—Gold and silver thread is imported into China from England and Holland. It is used in borders of fine goods, in ornamenting ladies' dresses and other similar objects. The quantity imported is great. The English sells for from thirty-six to forty dollars per pecul.

Cloves.—Considerable quantities of this spice are imported into China. The price for Moluccas cloves is from twenty-eight to thirty dollars a pecul, and for those

from Mauritius from twenty to twenty-four dollars per pecul. Mothu cloves is a larger and inferior kind brought from the Straits of Malacca. The price fluctuates greatly, according to the supply; from ten to twelve dollars per pecul is the average, and is used for scents. The oil of cloves is also used to some extent among the Chinese. The color when pure is of a reddish brown, which gradually becomes darker by age.

Nankeen.—This cotton cloth takes its name from the city of Nankin, but is also made at Canton, and goes by the name of the company's and narrow nankeens. The former are the finest and most esteemed. The price varies from sixty to ninety dollars per hundred pieces. They are sent to the United States and Europe; and it is said that American cloth is sent to China and dyed there for nankeens.

HONOLULU, SANDWICH ISLANDS, *November*, 1845.

No spot on the globe could be chosen perhaps which is more congenial to humanity than these favored isles, where the entire season is summer, with but from ten to fifteen degrees of variation in the thermometer during the year; thus forming a climate also particularly well adapted for that numerous class of invalids in our country, who suffer there from phthisis, owing to the rigor and variableness of our climate, and who generally survive but few years, where the exciting causes remain, but by removing to a climate so mild may live to an old age, without suffering any inconvenience from their predisposition to that fatal disease.

This has been verified in numerous instances, and every year causes the objections to be less in making these islands a place of residence, as civilization is rapidly advancing among the native population, and its wants will tend to increase the foreign community and thus afford permanent good society.

This port is visited by a greater number of whale ships than any other in the Pacific, between one and two hundred touching here annually for supplies and repairs; more than three-fourths of which are American. All whale ships are allowed to sell goods to the amount of two hundred dollars without paying duty, and thus perhaps fifteen thousand dollars worth of goods are introduced in this way into port.

The only import duty is three per cent. ad valorem upon all goods indiscriminately. Goods are allowed to be transhipped or re-exported, on payment of a duty of one half per cent. ad valorem, or, where the import duty has been paid, a drawback of two and a half per cent. ad valorem.

All duties on the export of gold and silver were abolished, as injurious to commerce, by the law of 28th April, 1843.

There is no export duty on any of the productions of the island.

The harbor dues at this port are the following, viz:

Twenty cents per ton on merchant vessels.

Six cents per ton on whale ships and merchant vessels, entering for obtaining refreshments.

Two dollars for the use of the buoys.

One dollar for certificate of clearance.

One dollar per foot for pilotage for taking a vessel in or out.

No harbor dues are exacted of a vessel having a Hawaiian register, or of a vessel belonging to a resident foreigner who has taken the oath of allegiance.

A vessel owned by a foreigner who has not taken the oath of allegiance, but who resides permanently on shore in the occupation of a dwelling house or shop, pays only one half of the usual dues.

The nett revenue of the kingdom is more than fifty thousand dollars, and no doubt could be much increased by a better policy to promote agriculture and population.

The island is capable of producing arrow root, castor oil, coffee, silk, indigo, tobacco, turmeric, rice, &c., to almost any extent, but it is only lately that attention is being devoted to these objects, and already considerable capital has been invested. More than six thousand tons of sugar and eighty thousand gallons of molasses are produced annually. The yearly produce of the kukui, or paint oil, is about ten thousand gallons. Horses, cattle, hogs, sheep, and goats, are abundant and rapidly multiplying, and in some places all but the first have become wild and are multiplying fast.

Most of the necessaries are cheap and good.

The whole population of these islands is estimated now not to exceed one hundred and ten thousand souls, and by all observations appears to be decreasing; but the estimation of Captain Cook, who attributed to these islands four hundred thousand, no doubt was overrated by one-half.

Amomum Zerumbet.—This plant will frequently be seen in small patches in the neighborhood of Honolulu; the leaves are broad and pinnate, the flower spike compact, bractea red, flowers pale yellow and without odor. It yields a fine fluid which allays thirst.

Cyrtandra Lessonia.—This is one of the forest trees of the Sandwich islands. It has white monapetalous flowers, which are very fragrant, and the fruit is a white berry, with two cells and many seeds.

Cyrtandra Triflora.—This is a shrub found in thick shady places near the Pali precipice.

Piper Methysticum.—This is the plant called kava or ava by the Polynesians. The leaves are alternate, on rather long petioles, broad heart-shaped and smooth, much veined and have a sombre green color. The root is used to prepare the intoxicating drink called awa. A half a pint of the infusion produces intoxication, but no excitement of body or mind, and a long continued use a leprous eruption of the skin. The king cultivates a considerable quantity, and is said to be under excitement of it more or less every evening. It has an extremely nauseous taste to those unaccustomed to it. It is much employed also in dropsy as a remedy, and is said to be very effectual.

January, 1846.—As a commercial place Mazatlan dates but eight or ten years back, when it consisted of but a few houses or miserable huts, principally occupied by Indians or half-breeds, and who in fact constitute the great majority of the inhabitants, the merchants only forming the white population.

At present it is a place of considerable trade, and in its rapid growth has resembled many of our western towns, but here many of the houses are mere hovels, while a few members of the mercantile community have splended mansions. I have been informed that it is at present the only town in Mexico that is rapidly increasing in population. The prosperity of this place is caused by the silver mines of the interior, a large amount of bullion and coin being brought here for exportation, which is nearly all smuggled on board English men-of-war. The Mexicans, in returning, take a large amount of merchandise of various kinds in the interior.

The aspect of the surrounding country is barren and uninviting, having a high range of mountains in the distance, among which are some fertile vallies, and from whence this place is supplied with fruit and vegetables, being transported a distance of more than fifty miles on mules, there being no roads whatever yet constructed for carrying of any kind, and in consequence provisions of all kinds are exceedingly dear.

There is a peculiar feature given to the country here by a species of cactus (columnarius) which often rises to the height of forty feet, having a trunk sometimes three feet in diameter with the summit much branched, the branches deeply furrowed and armed with spines. The flowers are of a pale red color, rather inconspicuous. Much of the cultivated land is enclosed with this plant, the branches being cut off six or eight feet long and inserted into the ground, where they soon take root, and by their spines prevent the ingress of animals.

The principal forest tree here is the , belonging to leguminoseae, and it much resembles the locust in appearance. The natives call it ebony, from the resemblance of the heart wood to that timber. By the English it is called iron wood, from its weight. It takes a very high polish, but is very brittle, and is frequently fashioned into canes.

A beautiful species of justicia will frequently be found entwined around the cactus, with red terminal flowers in clusters.

The Cuscuta Americana is found abundantly in this neighborhood. It is a parasite, without roots, and entwines around other plants. The flowers are white.

There is a species of rhamnus in great abundance here, which the inhabitants use to give an acid taste to the water they drink. Some birds live entirely on the berries while in season. The flowers are yellow and the berries of an orange color.

Jatropha Urens.—This is a plant with variegated leaves, armed with long silvery hairs, and when touched produces a stinging effect.

June, 1846.—The geology of the western coast of South America is very interesting, in consequence of the great convulsions of nature which have taken place since the settlement of the country by Europeans, and also the visible effects of these which have occurred at a remoter period. Here, cities have been sunk and long lines of coast elevated in a few minutes, while the shattered and broken rocks, traversed by innumerable dykes of green stone, show what commotions formerly took place. The surrounding hills of Valparaiso consist of a granitic formation, which sometimes assumes the character of gneiss, and sometimes of granite. Their summits are flat-topped, and their flanks are rounded. That side of these mountains which fronts the prevailing winds is generally covered with forest. Here, during the summer, which forms the greater part of the year, the wind blows straightly from the southward, and a little off shore, so that rain never falls; but during the three winter months it is sufficiently abundant. The vegetation in consequence is very scanty.

Chile is traversed by several mountain chains, between which are beautiful vallies, and these are connected by narrow passages. These vallies, together with the passages, were formerly the bottoms of inlets and bays. A very fine kind of wheat is extensively cultivated in these vallies, also Indian corn, peaches, figs, apples, grapes, strawberries, and many other kinds of fruit; but the staple food, particularly among the laboring classes, is a kind of bean.

Bell mountain is six thousand four hundred feet high, and twenty-six miles distant from Valparaiso, and at this season of the year presents a fine view, covered with snow.

In the neighborhood much copper is found, and the ore is mostly sent to Swansea, England, to be smelted. The Chile government, or rather the old Spanish law, encourages the searching for mines. The discoverer may work a mine on any ground by paying five shillings, and before paying, he may even try in the garden of another man. The Chilian method is still the cheapest. The two principal improvements introduced by foreigners have been, first, by roasting the copper pyrites, which is the common ore in Cornwall, and the English miners found this thrown away as useless; secondly, stamping and washing the scoria from the furnaces, by which process particles of metal are recovered in abundance. They send to England cargoes of this scoria or cinders. The Chilian miners thought that there was not a particle of copper in the pyrites, and were under this mistake for many years, and laughed at the English who bought their richest veins for a few dollars. The workmen receive about one pound sterling per month and food, which consists of sixteen figs and two small loaves of bread for breakfast, and for dinner boiled beans, for supper broken roasted wheat grain. The miners who work in the mines receive about twenty-five shillings per month, and are allowed a little "charqui" or dried beef.

Very respectfuly submitted,

J. C. REINHARDT, *Naturalist.*

To Captain John Percival,
Commanding United States Frigate Constitution.

[CORRECTION.]

WASHINGTON, *September* 15*th*, 1846.

FRANCIS MARKOE, JR., ESQ.,
Corresponding Secretary of the National Institute.

DEAR SIR: In the third Bulletin of the National Institute, containing the proceedings of the meeting of April, 1844, the following announcement appears at page 432:

"*On the measurement of Base Lines—Captain W. A. Swift, U. S. Army.*"

Supposing that the paper thus designated was intended to represent the title of the paper which I had the honor to read before the society on the 5th April, 1844, I beg to state, that the words used in the announcement quoted above, convey neither the idea of the character of the paper in question, nor the object which I had in view in making it.

The title, as prefixed by myself, is as follows:

"*Description of the Base of Long Island, (New York.) measured by Ferdinand R. Hassler, Esq., in the year* 1834, *for the survey of the coast of the United States.*"

I have to request the favor of you to cause the error which I have pointed out in the title to be stated in the forthcoming bulletin of the society's proceedings, in order that the purport of the paper may not be misunderstood. It does not profess to be upon the "Measurement of Base Lines;" on the contrary, it assumes to be a description of the *Base of Long Island*, in the operations of which it became my duty, as one of Mr. Hassler's assistants in the coast survey, to partake, from the commencement to the termination thereof.

Very respectfully, your obedient servant,

WM. H. SWIFT,
Capt. Topog. Engineers.

10 AUG 1887